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COVER: May 13 marks the 67th anniversary of the Navy Nurse Corps. RADM Alene B. Duerk has guided the Corps through the past five years, years that have seen the introduction of pediatric, Ob/Gyn, and family nurse practitioners and the assignment of Nurse Corps officers to high-level executive positions in Navy medical facilities. RADM Duerk's strong feelings for the dual career of naval officer and nurse are expressed in her own words beginning on page 8.

The continued support of the Media Division, Educational Programs Development Dept., Health Sciences Education & Training Command (HSETC), NNMC, Bethesda, Md., is gratefully acknowledged.



At the Annual George Washington's Birthday Military Party, sponsored by Naval Reserve Medical Company 9-4, Kansas City, Missouri, guest speaker VADM D.L. Custis introduces the company commanding officer, CDR P.E. King, MC, USNR, and Mrs. King.

from the Chief

The military physician, dentist, hospital administrator, nurse and allied scientist have responsibilities to their respective professions which transcend their military role. They can ill afford such preoccupation with military medical matters as to render them passive observers of troubles rampant in the national health care scene.

There is today problem commonality, stemming from socioeconomic and political challenges, throughout the entire functioning structure of all health professions.

The ultimate challenge will come as Congress moves closer to enactment of a comprehensive national health insurance program. Surely one can do more than just hope their ultimate decisions will not be made counter to the best judgment of bona fide experts in health.

"Must reading" for every member of the Navy Medical Department is the special article, appearing in the March 13, 1975 issue of the New England Journal of Medicine, entitled "The Federal Involvement in Health." It is a very cogent and telling report by Doctor Charles Edwards, recently resigned from the senior professional health position in the federal bureaucracy. His analysis will be received with considerable empathy by the military health professional.

Military medicine is a sizable and very significant element in the pluralistic public-private health care system of the United States — a totality which Doctor Edwards feels is moving steadily toward its own destruction, not by

design, but by default. Factionalism within the system has too long prevented collective professional leadership. We who serve in one of the bureaucratized segments of that system have particular reason to know how tenuous professional control of medical care can be.

In fact, constituted as we are, and standing apart, I for one make the categorical prediction we will shortly lose that control unless we shed our own insularity and accept responsibility as a part of the mainstream of health professionalism.

It is no longer enough to seek fellowship in our respective colleges and specialty societies. The collective voice which deserves our reinforcement is coming from the American Medical Association, the American Hospital Association, the American Dental Association and the American Nursing Association. It is there that, in response to crisis, articulate leadership so long absent from the health care industry is beginning to emerge.

Every member of the Navy health care team should know and appreciate what conscientious effort these Associations have made before Congress and within government to improve the situation of their constituents in the Armed Services. They deserve from us all the dues and assessments they require; and after that, our unstinted personal participation.

John Alexander McMahon, the president of the AHA recently said, "At no time in history have all sectors of the health care team been more willing and more ready to thrust aside their adversary roles and join forces in a collective effort. We must seize this moment and build upon it."

Let every one of us in the uniformed forces health care sector lend our voice to a national chorus so concerted as not to be denied — so authoritative as not to be confounded by the health care mountebanks. Congressional leaders have no real desire to act in ignorance of decision impact. They need the guidance of unified health professionals if a pluralistic, patient oriented, public-private, voluntary health care system is to survive.

Every one of us has a choice between succumbing to change or guiding change. Which will it be for you?



Flag Officer Selection

Edward U. Austin was born in Raleigh, N.C. on 15 October 1922. After receiving his undergraduate education at Mars Hill College and the University of North Carolina, he earned his D.D.S. degree from Emory University, Atlanta, Ga., in 1944.

CAPT Austin was commissioned an ENS in the Naval Reserve in 1942, but resigned this commission one year later to enlist as an apprentice seaman in the Navy V-12 Program. He was recommissioned a LTJG in the Navy Dental Corps in 1944.

From 1944 to 1946 CAPT Austin was stationed at the Naval Training Center, Great Lakes, Ill., as an assistant dental officer. Upon returning to civilian life in 1946, he entered the general practice of dentistry in Robertsonville, N.C., later moving to Charlotte, N.C., where he now resides. His first Naval Reserve assignment was with Surface Battalion 6-8. He was also one of the original members of the Naval Reserve Dental Company 6-3, which was organized in 1948 and recognized as the outstanding national dental company in 1973.

In 1950 CAPT Austin undertook graduate study in oral surgery at the Graduate School of Medicine of the University of Pennsylvania. Following an oral surgery residency at Geisinger Memorial Hospital, Danville, Pa., he was recalled to active duty as camp oral surgeon at Marine Barracks, Camp Lejeune, N.C.



CAPT Edward U. Austin, DC, USNR

CAPT Austin subsequently returned to the private practice of oral surgery in Charlotte. From 1955 to 1960 he was CO of Dental Company 6-3, honored in 1956 as the outstanding Naval Reserve company of the 6th Naval District. He then served as dental officer of the Training and Support Command, Naval Reserve Training Center, Charlotte, for three years, before re-joining Dental Company 6-3.

CAPT Austin is a Diplomate of the American Board of Oral Surgery, and a Fellow in the American College of Dentists. He is a past-president of the Charlotte Dental Society, and Southeastern Society of Oral Surgeons; has served in the House of Delegates of the American Dental Association since 1968; and was a trustee of the American Society of Oral Surgeons from 1970 through 1974. He is on the staff of three hospitals in Charlotte, and is consulting oral surgeon for the Veterans Administration. Since 1966 he has been a member of the Mecklenburg County Board of Health, serving as chairman for the past two years.

Maxine Conder was born in Bingham Canyon, Utah on 20 April 1926. She spent her early years in American Fork, Utah, and in 1938 moved with her family to Tooele, Utah, where her parents still reside. She received her diploma from the St. Marks Hospital School of Nursing, Salt Lake City, Utah, in 1947, and was employed as an office nurse at the Tooele Clinic for the next four years.

On her 25th birthday, 20 April 1951, she was commissioned an ENS in the U.S. Navy. Her first assignment was to Nav Hosp San Diego, Calif., where she served as charge nurse on a variety of services, including the thoracic, surgical, orthopedic, and neurosurgical wards. In August 1953, she transferred to the USS *Haven*, stationed in Korea. During her short tour of sea duty she was charge nurse of the thoracic and neurosurgical ward. In April 1954 she transferred to the Nav Hosp Guam, where she participated in the opening of the new naval hospital and was one of the first occupants of the newly constructed nurses' quarters. She subsequently reported to Nav Hosp Boston, at Chelsea, Mass., in March 1955, where her duties included service as charge nurse of an active polio unit



CAPT Maxine Conder, NC, USN

during the last large epidemic of this dreaded disease experienced in the United States. In May 1957 she joined the staff of Nav Hosp Camp Pendleton, Calif.

Selected for full-time duty under instruction in 1960, CAPT Conder attended the University of Utah, Salt Lake City, receiving a bachelor of science degree in nursing in 1962; following this, she served as nurse programs officer at the Naval Recruiting Station, Seattle, Wash., with recruiting areas in Washington, Oregon, Idaho, and Montana. In 1966 she earned a master's degree in nursing from the University of Washington.

Subsequent assignments included service at Nav Hosps Camp Lejeune, N.C.; Guantanamo Bay, Cuba; St. Albans, N.Y.; and Portsmouth, N.H. In September 1970, she reported again to Nav Hosp Boston, to serve as chief nurse. During her three years there, she saw the return of the prisoners of war from Vietnam, and a fire that destroyed some 20 square blocks of the city of Chelsea; she was present when a live bomb was discovered within the hospital, and was on hand when orders were received to permanently close the medical facility. Since February 1974, CAPT Conder has served as chief nurse of NAVREGMEDCEN Philadelphia, Pa.

On 13 February 1975, CAPT Conder became the second woman to be appointed to the rank of RADM in the U.S. Navy. She will also be the Navy's second Nurse Corps RADM.

At the time her selection was announced, CAPT Conder was vacationing in Puerto Rico with her parents, who were celebrating their 50th wedding anniversary. News of her selection was passed to CAPT Conder through the chief nurse at Nav Hosp Roosevelt Roads, P.R.

CAPT Conder is a member of the American Nurses' Association. She holds the following medals: United

Nations Service, Korean Service, National Defense Service, Meritorious Unit Commendation, and Meritorious Service.

William L. Darnall, Jr., was born 5 October 1920 at Berkeley, Calif. His father, CAPT William L. Darnall, who served in the Navy Dental Corps from 1913 to 1941, was on the original staff of the Naval Dental School in 1922; the library at NGDS Bethesda, Md., is named in his honor.

After graduating from Northwestern University School of Dentistry in 1943, CAPT Darnall was commissioned in the Navy Dental Corps, and was assigned to the Naval Training Center, Great Lakes, Ill., as an assistant dental officer. Subsequent assignments included USS *Iowa*; USS *Macon*; U.S. Naval Academy, Annapolis, Md.; Nav Hosp Portsmouth, Va.; and Nav Disp Washington, D.C. He served as XO and CO of the 2nd Dental Co., 2nd Marine Division, Camp Lejeune, N.C., before reporting to the 3rd Marine Amphibious Force, Danang, RVN, as force dental officer (1968-1969). A tour of duty as OIC, Dental Clinic, Marine Corps Recruit Depot, Parris Island, S.C. (1969-1971), was followed by one year of service as dental officer of Headquarters, Marine Corps. Since 1972 he has been CO of Naval Dental Clinic, Camp Pendleton, Calif.

CAPT Darnall was awarded the Legion of Merit with Combat V. He also holds the following medals and ribbons: American Defense Service, Asiatic-Pacific Campaign with four stars, World War II Victory, Philippine Liberation with two stars, Navy Occupation Service — Asia, Philippine Republic Presidential Unit Citation, National Defense Service with one star, Vietnam Service, and Republic of Vietnam Campaign Ribbon with three stars.



CAPT W.L. Darnall, Jr., DC, USN



CAPT Joseph T. Horgan, MC, USN

Joseph T. Horgan was born in Cambridge, Mass., on 4 September 1924. He graduated from Harvard University in 1947 with a B.A. degree in biology, and earned his M.D. degree from Georgetown University in 1951. After interning at the Boston City Hospital, he began residency training there in internal medicine, and completed his training at Nav Hosp Bethesda, Md.

Dr. Horgan first entered naval service in December 1943 as a pharmacist mate, remaining on active duty until May 1946. His duty included service in the Pacific Theater. Later, as a medical officer, he served in Ismir, Turkey, and at naval medical facilities in Chelsea, Mass., Bethesda, Md., and Newport, R.I. After a tour as chief of medicine at Nav Hosp Naples, Italy, he reported to Nav Hosp Portsmouth, Va., as head of the Department of Nuclear Medicine and Endocrinology; he was later assigned as the chief of medicine. From June 1972 to February 1974, he served as XO at Portsmouth, and after a command reorganization, became deputy commanding officer and director of clinical services. CAPT Horgan assumed command of the NAVREGMEDCEN Jacksonville, Fla., in June 1974.

A Diplomate of the American Board of Internal Medicine, CAPT Horgan has served as assistant dean of the Eastern Virginia Medical School (1972-1974). His membership in professional societies includes the American College of Physicians, American Medical Association, and the Society of Nuclear Medicine. Currently, he is an active member of: the Medical Advisory Board to the mayor of Jacksonville, the Jacksonville Area Health Planning Council, the Jacksonville Emergency Medical Services Council, and the Northeast Florida Heart Association.

CAPT Horgan holds the following medals and ribbons: Meritorious Service, Joint Services Commendation, Navy Commendation, World War II Victory, American Campaign, Asiatic-Pacific Campaign, National Defense Service, and Philippine Liberation.

Walter M. Lonergan was born in Boston, Mass., on 29 January 1922. He attended Tufts College, Medford, Mass., as a premedical student for three years, before enlisting in the Hospital Corps of the U.S. Navy. He subsequently received his M.D. degree from the University of Buffalo School of Medicine in May 1948, and began his internship at the E.J. Meyer Memorial Hospital, Buffalo, N.Y. He also trained in obstetrics and gynecology at that hospital, and at the Sisters of Charity Hospital.

Dr. Lonergan was commissioned in the Navy Medical Corps on 18 June 1951. His first assignment was on the Ob/Gyn staff at the Nav Hosp Great Lakes, Ill., followed by duty at Nav Hosp Naples, Italy. He subsequently served at Nav Hosps San Diego and Camp Pendleton, Calif., as well as with the 1st Marine Division. After duty as head of Assignment and Distribution, Medical Corps Branch, Professional Division, BUMED, Dr. Lonergan became chief of Ob/Gyn at the National Naval Medical Center, Bethesda, Md., in July 1966. He subsequently joined the staff of Nav Hosp Portsmouth, Va., as XO, becoming deputy director of NAVREGMEDCEN Portsmouth in April 1972. He presently is assigned as CO of NAVREGMEDCEN Charleston, S.C.

CAPT Lonergan is a Diplomate of the American Board of Obstetrics and Gynecology, and served as consultant in Ob/Gyn to the Navy Surgeon General from 1966 to 1970. He has held positions as associate clinical professor of Ob/Gyn at Georgetown Medical School, Washington, D.C., and at the Medical University of South Carolina, Charleston.

Dr. Lonergan holds the following medals: Meritorious Service, Navy Commendation, American Campaign, Good Conduct, World War II Victory, and National Defense Service.



CAPT Walter M. Lonergan, MC, USN

Winston H. Weese, a native of Little Rock, Ark., was born 21 February 1924, and graduated from Culver Military Academy and Cornell University, Ithaca, N.Y. After joining the Navy in 1943 as an apprentice seaman, he qualified for the Medical Student V-12 Program, and was commissioned a LTJG in June 1946.

He reported for his first active duty as a Navy physician to NAS San Diego, Calif. In December 1947 he joined the Civilian Administration Unit, Yap Island, Western Carolina Islands, where he practiced tropical and general medicine at the native dispensary and was medical officer for the leper colony on Pekel Island, subsequently serving at the native hospital on Koror Island in the Palau Group. In November 1948 he joined the staff of the Orthopedic and Internal Medical Service, Nav Hosp Guam, with additional duty as instructor of internal medicine at the U.S. Navy Medical School for Native Health Practitioners, Guam Memorial Hospital. During his tour of duty on Yap and Palau he provided health care for the native population of many small islands of the Western Carolina and Palau Island groups. He then served as assistant medical officer in the USS *General Butner*, and was separated to inactive duty as a Reserve officer 30 May 1949.

During seven years of postgraduate medical training at Charity Hospital in New Orleans, the American Hospital of Paris, and the University of Vienna, Dr. Weese participated in the Reserve program primarily through correspondence courses. In 1956 he received inactive duty training orders to Medical Reserve Company 8-2, New Orleans, where he remained an active member until the company was disestablished on 30 June 1973. Subsequently, he served as Flotilla Medical Officer, Submarine Division 8-32, and since 1 July 1974 has been CO of the newly restructured Navy Regional Medical Center Unit 1909, New Orleans.

In addition to primary training duty orders with the Medical Company, Dr. Weese has held concurrent orders since 1960 as medical liaison commandant's representative at Louisiana State University School of Medicine, where he is an associate clinical professor of Ob/Gyn and a senior attending surgeon at Charity Hospital of Louisiana. Concurrent with these two assignments he held training duty orders as Group Command 8-1 (L) medical officer and counseling board member, and as a CNO/COM8 Seapower Presentation Team public speaker.

Dr. Weese has performed a wide variety of operational ACDUTRA ashore and afloat, including service in the USS *Haven*, and at Nav Hosps Great Lakes, San Diego, St. Albans, and Bethesda, as well as at the Aerospace Medical Institute, Pensacola, Fla., COMSERV-LANT, Norfolk, Va., and CINCPACFLT, Pearl Harbor,



CAPT Winston H. Weese, MC, USNR

Hawaii. He has received orientation in submarine medicine in the USS *Sperry* and the USS *Asprao*.

He has also performed ACDUTRA in Navy medical and hospital administration at COM9, BUMED, the Mayo Clinic in Rochester, N.Y., and with the Armed Forces District of the American College of Obstetrics and Gynecology. In addition to serving as an instructor at Nav Hosps San Diego and Bethesda, and at the Armed Forces Institute of Pathology, he has participated in numerous senior Reserve officer conferences and seminars. Most recently he sat on the CHNAVRES Navy Reserve Policy Board.

Besides serving as vice-president of the Greater New Orleans Area Council of the Navy League, Dr. Weese is a life member of the Naval Reserve Association (NRA); he has served as president of the Acadian Chapter, New Orleans, La., as district surgeon of the 8th Naval District, and as national surgeon of the NRA (1972-74).

A Diplomate of the American Board of Obstetrics and Gynecology, and a Fellow of the American College of Obstetrics and Gynecology and the American College of Surgeons, Dr. Weese is associate editor of the *Journal of Reproductive Medicine*, and is a member of the board of directors of the American Fertility Society and the American Cancer Society. He is a founder of the American Society of Colposcopy and Colpomicroscopy, and has served as an officer in many other medical organizations.

Dr. Weese holds the following medals: Meritorious Service, Navy Commendation, Naval Reserve, Armed Services Reserve, American Theater Service, and WWII Victory. He was awarded the NRA National Award of Merit in 1974. 🇺🇸

RADM Alene B. Duerk, NC, USN:

THE VOICE OF EXPERIENCE

Only weeks away from retirement, RADM Alene Duerk, director of the Navy Nurse Corps, can look back on a career of unprecedented achievement. From her first days as an anonymous young ensign reporting for duty at Naval Hospital Portsmouth, Virginia, to her years in the full blaze of international recognition as the first woman and first nurse to advance to the rank of rear admiral in the Navy, her career has been one of tireless service: service to her patients, to her country, to her profession, and to the countless men and women privileged to call her friend.

When she speaks of Navy nursing, she does so with authority, for during her 32-year career she has filled all the positions, stood all the watches. She has been a staff nurse, nursing instructor, inservice coordinator, recruiting nurse programs officer, assistant chief nurse, chief nurse, and finally Nurse Corps director. She has served aboard a hospital ship, at Navy medical facilities in the United States and overseas, at a recruiting station, in the Pentagon, and at

the Bureau of Medicine and Surgery. Never one to beat down closed doors aggressively, she prepared herself so well, and fulfilled so effectively all the duties she was assigned, that eventually, in simple justice, the doors were opened for her. Neither the Navy nor its Nurse Corps will ever be the same.

Throughout her career, RADM Duerk has been noted for the care and concern she expressed for those with whom she worked. She was an enthusiastic supporter of equal opportunity — and equal responsibility — for women, and welcomed the opportunity to lead the Nurse Corps into new areas of health care. Any Navy nurse with a dream built on the solid ground of reality found in RADM Duerk a strong supporter and colleague.

During her tenure as director of the Navy Nurse Corps, RADM Duerk was frequently called upon to speak about her work, and her hopes for the future of Navy nursing. Hers was the voice of experience, and her words are preserved here for the Navy nurses who will follow her example.

"At approximately 10 p.m., on the night of 24 March 1943, a very weary, bewildered, and excited young woman dragged two suitcases up the front steps at the Naval Hospital, Portsmouth, Virginia, and reported for duty as a Navy nurse. I was that young woman. Within a few minutes the evening supervisor, a lieutenant junior grade, swooped into the lobby and escorted me to my quarters. Quarters? I had 20 roommates and no privacy. Each of us had a bed, bedside locker, straight chair, half a dresser drawer, half a pasteboard locker, and shared hanging space on metal poles for our uniforms. We had no orientation, and all I knew was that I could take care of patients. Sometime that evening someone gave me my first Navy nurse cap with the single gold stripe, and I was told to report to the chief nurse the following morning at 7 a.m. I was a full-fledged Navy nurse."



ENS Duerk, 1943

"I am sure you have asked yourselves and each other if this orientation period was really necessary. Will the marching, drills, and inspections make you a better nurse? Yes, they will. They will also make you a better naval officer. With the background of understanding about military discipline, leadership, Medical Department organization, and the Navy way of life that you have gained here, you can now go with added assurance to the hospitals to which you have been assigned."



Nurse and naval officer,
Philadelphia, 1957



An able LCDR, 1958

"It is the responsibility of the women of today to change the attitudes, abilities, and aspiration of all women so that they not only gain equal rights but that they also deserve equality."

"Your positive attitudes about other women must be readily visible to those with whom you work and associate. Not strident, noisy opinions, but calm, firm defense of their qualifications and abilities."



Smiles for the new CDR, 1962



Patient care, Great Lakes, 1969

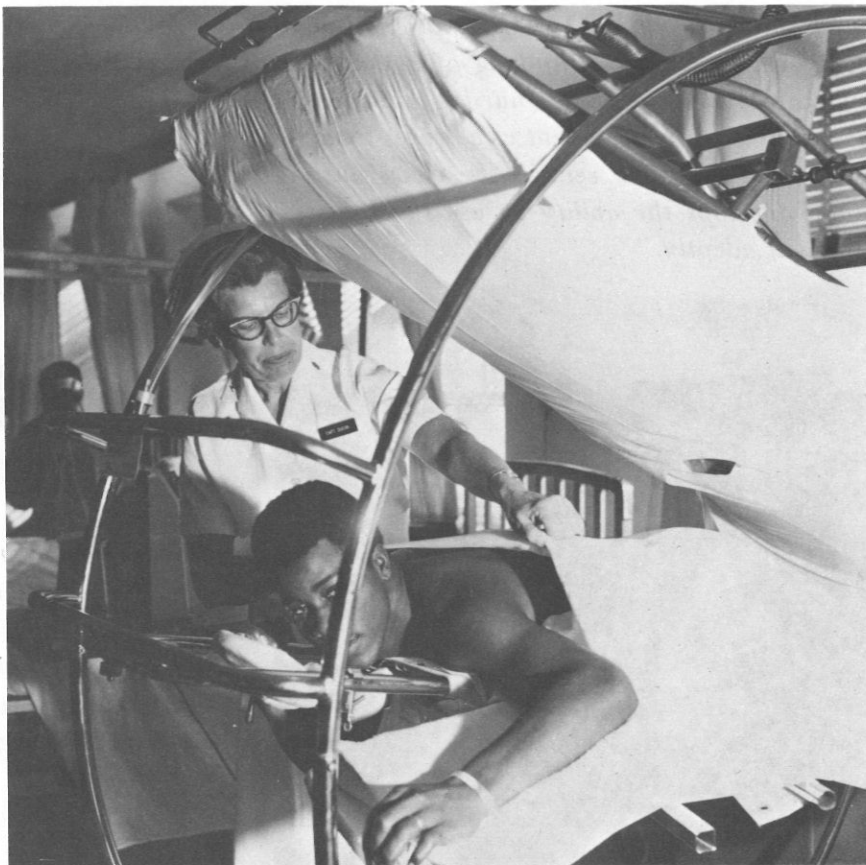
"The chief objective, the very reason for the existence of nurses, is to provide optimum patient care. How we go about meeting this objective is what nurse management is all about."

"All of us are aware of the team concept of patient care. Only by working and cooperating with the doctors, dentists, dietitians, therapists, corpsmen, and other medical specialists can we call ourselves a team. It is the responsibility of each of us to become a contributing member of that team."



Team work, 1970

"You as a person must become larger. Your world has grown, and you must grow with it. Now you are responsible not only to your family and yourself, but to an organization, to a hospital, to people who work there, and to the patients in your care as well. Each of you is a valuable, essential part of the Navy team."



"Your world has grown," 1970

"The opportunities for women are unbounded, the potential for career growth unlimited, and there is tremendous job satisfaction. I think that women in the Navy have already proven that the all volunteer force is a viable objective, and that women have a tremendous contribution to make in realizing that objective."



Greeting the Navy family, 1972



Now it's RADM, 1972

"Now you are in the Navy. You have chosen to widen your scope of responsibilities by accepting a commission in an organization which is large in numbers but a very close-knit group. Yes, there really is a Navy family which includes all of us — everyone in the Navy. As you travel to new duty stations and meet new people, you will find that you are constantly meeting old friends, old acquaintances, and friends of friends."

"A nurse should be thought of as a potential manager only when she stops thinking of management as haphazard and secondary to nursing practice, and begins thinking of management as a professional responsibility in the same vein as she views nursing care, and develops the ability to use the tools of management adeptly."



Professional responsibility, London, 1973

"The reputation you have in the civilian community becomes the reputation of the Navy in the eyes of those people with whom you come in contact. This is a tremendous responsibility. For in the eyes of others, you are the Navy, you are Navy medicine."

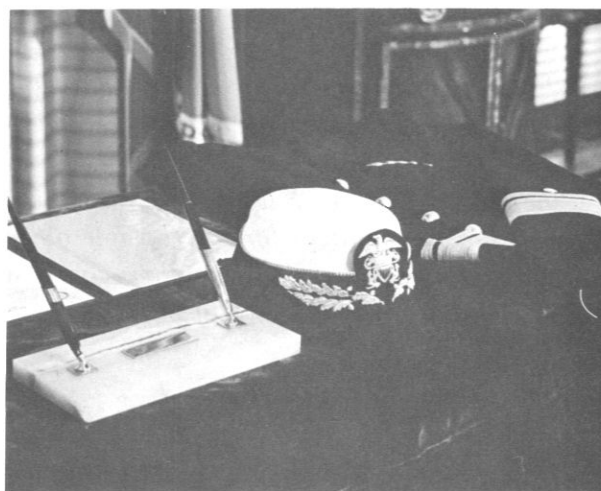


"You are the Navy, you are Navy medicine . . ."



The listening side, High Wycombe, England, 1973

"Each of us must not only be able to communicate our knowledge and understanding to the other team members, but also our needs and the needs of our departments or services. In turn each of us must listen as others talk with us. The listening side of communication is the most difficult."



"The prime factor in success is ability. Women's abilities — qualifications — should be the very framework around which their goals are built. You must decide what you want to do and then gain the education and experience to meet the goal. You cannot expect to get a job or a promotion unless you have the education and/or the experience to perform that job." 🌿

A Study of Values—NURSING

By CAPT Mary F. O'Neill, NC, USNR

The 1957 study of Philip Jacob, *Changing Values in College*,¹ which reported that student values usually do not change during the college experience, sparked considerable controversy. However, a more recent summary of research, *The Impact of College on Students*,² published in 1969 by Kenneth Feldman and Theodore Newcomb, reported that changes in student values do indeed take place during the college experience, and that there are differences in student values at different types of institutions, in different curricular fields, and at different stages in the college program.

The current study was undertaken to compare the values of nursing students with those of other student groups, and to investigate the relationship of nursing student values to faculty values. The study sought to answer the following questions regarding values of student groups:

Are there differences between nursing student values and value norms for the general female college population?

Are there differences between the values of nursing students and values of students in other curricular fields?

Are there differences in values of students at successive class levels in each institution?

Answers to the following questions regarding values of student groups and faculty were also sought:

Is there an increasing similarity between student values and faculty values at the different levels of progress in each institution?

Is there a greater similarity in the smaller institutions between sophomore, junior, and senior student values, and faculty values?

Are values of junior and senior students who live on campus more similar to values of faculty than are the values of junior and senior students who do not live on campus?

Do junior and senior students with the highest academic potential on admission have values more similar to those of the faculty than junior and senior students with lower academic potential on admission?

Do junior and senior students whose values are more similar to those of faculty demonstrate higher achievement, as measured by course grades, than junior and senior students whose values are less similar to those of faculty?

The sample for the study consisted of 507 subjects, who represented faculty and students in three baccalaureate nursing programs in the Midwest. In selecting the institutions for study, variation in size was considered; another consideration was whether these were private or state-supported institutions. The Allport-Vernon-Lindzey *Study of Values*³ and the *Survey of Interpersonal Values*⁴ were administered to freshmen, sophomores, juniors, seniors, and faculty in each institution.

Scores indicating entry academic potential were obtained for junior and senior students in each institution, with the exception of transfer students. The entry score used in this study was the student's high-school rank, the common academic measure used by

A member of the Naval Research Company 9-1, Chicago, Ill., CAPT O'Neill may be reached at: 1459 Ohio St., Terre Haute, Ind. 47807.

The opinions or assertions contained herein are those of the author and are not to be construed as official, or necessarily reflecting the views of the Navy Department or the naval service at large.

the three institutions. A current grade-point average for nursing courses taken since the beginning of the academic year was also obtained for junior and senior students in each institution. Spearman's rank-order correlation⁵ and analysis of variance⁶ were the main statistical methodologies used in the analysis of data. Analysis of each question revealed the following:

There were significant differences between the values of nursing students and values of the general female college population (see Tables 1 and 2). The *social* and *benevolence* values, which were the dominant values among nursing students, clearly differentiated nursing students from the general female college population. Low scores on the *conformity* value also

characteristically differentiated the nursing students from the general female college population.

Significant value differences also occurred between nursing students and students in each of the other curricular fields. For example, nursing students had significantly higher *social* value scores than had students in any other curriculum. There were one or two dominant values in each curriculum; the dominant values of nursing students tended to differ significantly from those of students in individual curriculums.

There were also some significant differences in nursing student values at successive class levels. The tendency was for the greatest number of differences to occur between the freshmen and sophomore classes, with a lesser

TABLE 1.—MEANS AND STANDARD DEVIATIONS FOR NURSING STUDENTS AND GENERAL COLLEGE FEMALE STUDENTS ON THE ALLPORT-VERNON-LINDZEY VALUES

Value	General College* N = 1289		Nursing N = 459		F
	Mean	Standard Deviation	Mean	Standard Deviation	
Theoretical	35.7	7.2	37.5	6.3	22.5†
Economic	37.8	7.3	35.8	6.8	26.3†
Aesthetic	42.6	8.3	40.7	7.9	18.2†
Social	42.0	7.0	47.7	6.7	229.5†
Political	37.8	6.2	36.0	6.0	29.0†
Religious	43.8	9.4	42.1	8.5	11.6†
DF 1 and 1746					
*From Allport G, Vernon P, and Lindzey G: <i>Study of Values Manual</i> , 3rd ed., p. 12.					
†Significant at or beyond the .01% level.					

TABLE 2.—MEANS AND STANDARD DEVIATIONS FOR NURSING STUDENTS AND GENERAL COLLEGE FEMALE STUDENTS ON THE SURVEY OF INTERPERSONAL VALUES

Value	General College* N = 746		Nursing N = 447		F
	Mean	Standard Deviation	Mean	Standard Deviation	
Support	17.8	4.9	19.0	4.5	17.8†
Conformity	14.2	6.2	10.1	5.6	129.9†
Recognition	12.1	4.9	10.1	4.1	52.5†
Independence	16.1	6.6	17.2	6.1	6.8†
Benevolence	18.4	5.7	21.9	4.6	121.2†
Leadership	11.4	6.5	11.7	5.4	0.7
DF 1 and 1191					
*From Gordon L: <i>Survey of Interpersonal Value Manual Supplement</i> , p. xxiv.					
†Significant at or beyond the .01% level.					

number of differences at the upper class levels. There were no significant differences between the juniors and seniors in any school, except that in school B the seniors had higher *religious* values than the juniors.

Among nursing student groups and faculty, there was a remarkable similarity of student-faculty value patterns in each school, based on rank order correlation coefficients; however, there was a tendency toward regression of such similarity in the senior year. Though the value patterns were very similar, differences between student groups and faculty on the separate values became evident. An analysis of variance revealed a pattern of a decreasing number of student-faculty value differences up to the senior year; the least number of value differences occurred between juniors and the faculty, indicating that the values of juniors tended to be most similar to faculty values.

Regarding similarity of student values to faculty values and size of the institution, no strong pattern of differences existed. However, there was a tendency toward greater student-faculty value similarity in school B, the largest institution.

The data did not reveal any consistent pattern of student-faculty value similarity associated with place of residence. Although it was evident that the fact that a student did or did not live on campus tended to make a difference in agreement of student-faculty values, the value difference varied from school to school, and between various classes in the same school.

Regarding the relationship of student academic potential and similarity to faculty values, the data indicated that the values of junior and senior students who had the highest academic potential on admission were not more similar to the values of the faculty than were the values of students with lower academic potential. The data suggests that high-school rank may not be the major factor associated with junior or senior student-faculty value similarity; or that students with lower high-school rank, whose values originally differed from those of the faculty, may have changed in favor of faculty values during their freshman and sophomore years.

Juniors and seniors with values more similar to those of the faculty did not demonstrate higher achievement, as measured by course grades. Data in the first section of the report, showing high correlation coefficients for junior-senior student groups, suggests that the high similarity of student values, and the high similarity of student values to faculty values, reduced the influence of these values in differentiating student achievement.

The data indicated, then, that the dominant social and benevolent values of nursing students consistently differentiated these individuals from other curricular groups. Although the nursing students and faculty had

highly similar value patterns, significant differences were revealed between most student groups and the faculty on the separate values. The high degree of similarity between student and faculty values occurred irrespective of the student's high-school rank, and evidently reduced the role these values played in differentiating student achievement.

IMPLICATIONS OF THE STUDY

Unless preservation of the status quo is desired, the results of this study imply that particular attention should be given to the different values of students. For example, students with high theoretical values may prefer nursing activities different from the activities preferred by students with high leadership values.

The great solidarity of junior-senior student values, and the high similarity of value patterns between student groups, suggest a strong peer group relationship. Although it would seem that the influence of the instructor is mediated by the interaction among students, it also appears that student values and instructor (or supervisor) values are more likely to complement and reinforce each other when the interaction between students and instructors is meaningful.


The low leadership values have particular implications for the Navy. Further study may reveal whether the leadership value scores of students change between entry into the naval officer orientation program and completion of six months to a year of active military duty. A lack of change in the leadership scores would have implications for revising the orientation program or subsequent experiences.

REFERENCES

1. Jacob P: *Changing Values in College*. New York: Harper and Brothers, 1957.
2. Feldman K and Newcomb T: *The Impact of College on Students*, Vols I and II. San Francisco: Jossey-Bass, Inc., 1969.
3. Allport G, Vernon P, and Lindzey G: *Study of Values*. 3rd ed., Geneva, Ill.: Houghton Mifflin Co., 1960.
4. Gordon L: *Survey of Interpersonal Values Manual Supplement*. Chicago: Science Research Asso., 1960.
5. Nie NB and Hull CH: *Statistical Package for the Social Sciences*. New York: McGraw-Hill Book Co., 1970, pp. 153-4.
6. Edwards A: *Statistical Methods for the Behavioral Sciences*. New York: Rhinehart and Co., Inc., 1955, pp. 317-22.

The attention of interested readers is also directed to:

Gilford JP: *Fundamental Statistics in Psychology and Education*. New York: McGraw-Hill Book Co., 1965.

Hilgard E: *Theories of Learning*. New York: Appleton-Century Crofts, Inc., 1956. 

PERSONALIZED NEWBORN CARE

By LCDR Edward N. Zissman, MC, USN*

and

Mrs. Carolyn Edwards, R.N.

Babies aren't the only thing new in the nursery at Nav Hosp Orlando, Fla. With recent changes in policy and procedures, mothers are providing more personal care for their newborns, and the professional services of the staff are being used more effectively.

Before revising the existing plan for care of the newborn, staff members reviewed the operation of the nursery and isolated four chief problems:

- The one nurse assigned to the nursery had little time to instruct mothers in care of the newborn.
- Infection risk was higher than desirable, as newborns were exposed to all ward personnel, as well as to patients visiting from the gynecology ward.
- No area was set aside in which to change diapers.
- There was no place a mother could lay her baby if she needed a moment to rest.

The relatively minor changes necessary to correct these problems have produced major benefits. A partition was moved to enlarge the nursery, and to provide a separate adjacent feeding area. Window shades were added for privacy, and rocking chairs and rubber rings were provided for the comfort of the mothers.

Now, while the mother feeds, cuddles, and gets to know her baby, the nursing staff can circulate through the feeding area, observing the development of the mother-child relationship, and alert for any signs that help is needed. The nurses instruct the mothers in newborn care, demonstrating how to take rectal and axillary temperatures, and how to feed, bathe, and diaper the infant. This close contact with the nursery staff helps to eliminate many fears common to new mothers.

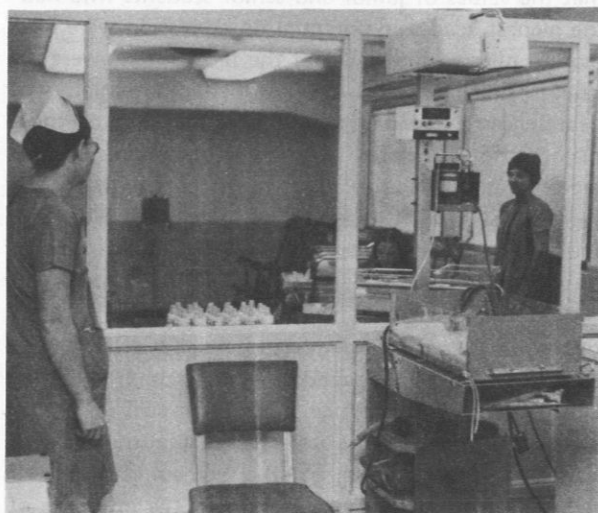
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Also in the feeding area, the new mothers can watch an audiovisual presentation, "Your New Baby,"[†] which complements their physician's instructions.

During the informal instruction periods emphasis is placed on safety precautions, such as the use of seat restraints when the baby is riding in an automobile.

In this supervised environment, new mothers learn from each other as well as from the nursery staff. Before the mother cares for her baby, she washes her hands and arms with Phisohex and puts on a clean gown. Except for the feedings at 0200, the baby's bassinet is rolled into the feeding area and placed beside the mother's rocker. (One of the most popular changes is allowing fathers to help with the feeding at 1800.) Supplies needed for infant care are available

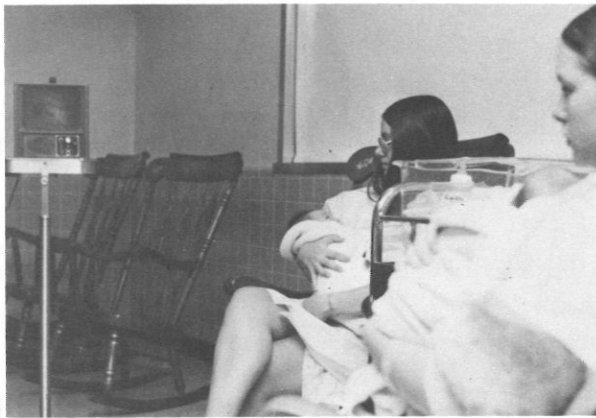


FEEDING AREA.—At Nav Hosp Orlando a glass-and-wood partition separates the feeding area from the rest of the newborn nursery.

[†]Audiscan®



ROCKABYE BABIES.—Comfortable rockers in the feeding area help mothers relax while they get to know their babies.



BABES IN ARMS.—New mothers at Nav Hosp Orlando watch an audiovisual presentation, "Your New Baby." The slides complement the instructions of hospital pediatricians.



NO COMPLAINTS.—Babies, mothers, and members of the nursery staff all benefit from the personalized newborn care provided at Nav Hosp Orlando.

in a drawer in the crib: alcohol sponges, wet cotton balls, sterile Vaseline gauze, diapers, ointment, bulb syringe, formula, and tissues. After the feeding, the baby is wrapped in a warm blanket, placed back in the bassinet, and returned to the nursery. The mother is thus allowed to assume as much or as little responsibility for her baby's care as she feels capable of handling.

After experiencing such personalized newborn care, the mother leaves the hospital more confident and better prepared to care for her new baby at home. She has developed a necessary trust and confidence in the nursery staff, and knows they are willing and able to help her. In fact, the happy, self-assured mother, and the contented healthy baby are the best spokesmen for the merits of personalized newborn care. 🌿

NAVY RELIEF SOCIETY

From 4 May through 6 June 1975, the Navy Relief Society will conduct a special appeal for funds.

The Navy Relief Society provides aid in time of need to personnel of the naval service and their families. Although Navy and Marine Corps men and women are normally self-reliant, self-supporting, and capable of handling their own affairs, circumstances peculiar to military life sometimes cause overwhelming problems. Frequent moves, an unexpected transfer to a foreign country, enforced separation of the family when the serviceman is at sea, failure to receive allotments and allowances, and illness or death in the family can create havoc in the best of plans.

To provide help in these emergencies, members of the naval service created the Naval Relief Society, dedicated to assisting Navy and Marine Corps members who find themselves in real difficulty. The funds used to help service families are derived solely from contributions. All donations are used to assist families; none of the money is used to pay the administrative expenses of the Society.

The support of the entire Navy family is needed to insure that this effort can continue. 🌿

REYE'S SYNDROME

A Pediatric Emergency

By LCDR Noel K. Dysart, Jr., MC, USNR

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In 1963 Reye and Morgan described a syndrome characterized by fatty infiltration of the liver associated with encephalopathy.¹ Over 300 cases of this entity were reported to the Communicable Disease Center (CDC), from December 1973 to April 1974.² Reports of successful early treatment of this potentially fatal disease emphasize the importance of early diagnosis and treatment, with peritoneal dialysis and/or exchange transfusion.^{3,4} Elevated serum ammonia⁵ and serum transaminase values, with encephalopathy, are the clinical hallmarks of this disorder.

Pathological changes include cerebral edema and fatty infiltration of the liver, heart, kidney, and pancreas.⁶ The hepatic dysfunction is generally regarded as the basis of the encephalopathy. This view is supported by experiments with hepatectomized dogs who show similar cerebral changes.⁵

The disorder has been reported to occur in children ranging from two and one-half months to 12 years of age. It seems to occur in epidemics. Twenty to 30% of the cases follow varicella. Many other cases are associated with either isolation of, or exposure to Influenza B virus.^{7,8} Although a CDC study reveals no similar association in this country,⁷ studies from Thailand suggest a role for aflatoxin — a toxic factor produced by a pathogenic mold (*Aspergillus flavus*)

contaminating certain fruits.⁶ Canadian workers recently reported that mice, pretreated with insecticides and then infected with murine virus, will develop a similar disorder.⁹ Some workers have suggested that common medications may play a role in the pathophysiology of the syndrome by modifying the target organs.¹⁰

ILLUSTRATIVE REPORT

L.G., a 28-month-old male infant, was well until five days prior to admission when he became febrile and developed rhinorrhea. The next day he was afebrile, but continued to have rhinorrhea and some cough. Over a four-day period he received 14 infant decongestant tablets. He began vomiting the day prior to admission. At 0400 on the day of admission the mother comforted him after he experienced a coughing episode, and she felt he was normal at that time. One hour later he was discovered to be limp, unaware of his surroundings, febrile, and breathing rapidly. Almost immediately he stiffened his body and wouldn't respond to verbal or painful stimuli; however, no incontinence was noted.

In the emergency room his extremities were observed to be held in tonic extensor position, and there was little response to an arterial puncture. Funduscopic examination revealed nothing unusual, but dolling of the eyes was minimal. Muscle tone and deep tendon reflexes were increased bilaterally; corneal, cremasteric and abdominal reflexes were absent; and bilateral Babinski's reflexes were demonstrated.

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Laboratory examinations revealed the following results: hemoglobin 13 gm/100 ml. White blood count 13,800/cu mm; differential: 61% neutrophils and 8% bands. Cerebrospinal fluid: cell count 5 lymphocytes/cu mm, protein 30 mg%, glucose 6 mg%. Arterial blood gases on room air: pH 7.41, PaO₂ 82 mm Hg, PaCO₂ 15 mm Hg. Blood electrolytes: Na 141 mEq/liter, K 6.4 mEq/liter, Cl 99 mEq/liter, HCO₃ 15 mEq/liter. Blood urea nitrogen 30 mg%. Prothrombin time 16 seconds, control 12 seconds. Several hours later, SGOT* was 444 IU, and blood ammonia was measured at 130 ngm% (normal 5 to 40).

The patient was treated with peritoneal dialysis and exchange transfusion. Within 12 hours he became more alert, and two weeks later he was discharged without neurologic deficit.

DISCUSSION

The above case demonstrates many of the typical features of Reye's syndrome. A prodromal viral illness occurs three to 20 days before severe vomiting develops. This is followed within hours by delirium and stupor. The delirium is marked by excitation, combativeness and seizures, but focal neurologic signs are usually absent.⁴ Coma, which may be staged (see Table I), can rapidly proceed from stage I to IV in eight to 24 hours. Other findings include hyperpnea, hematemesis, hematochezia, and diabetes insipidus.

TABLE I.—STAGES OF COMA

- | |
|---|
| I. Stuporous or delirious, can be roused by strong sensory stimulation. |
| II. Cannot be aroused by strong sensory stimulation, but stimuli lead to avoidance of flexion of arms. |
| III. Painful stimuli produce extensor posturing of upper limbs. Pupillary response and respirations are maintained. |
| IV. Flaccid without response. Absence of spontaneous respirations and of pupil responses. |

Initial emergency care should include preparation for cardiorespiratory support, since a sudden arrest is occasionally seen. Seizures should be controlled, and glucose

*Serum glutamic oxalic transaminase

should be administered if a state of hypoglycemia is substantiated. Lumbar puncture is indicated to rule out inflammatory central nervous system disease. A careful history is essential, to exclude toxin ingestion and to determine the quantity of salicylates administered during the illness. See Table II for other suggested laboratory tests.

TABLE II.—SUGGESTED LABORATORY STUDIES

- | |
|---|
| 1. Complete blood count and urinalysis. |
| 2. Lumbar puncture; CSF cell count, protein, sugar. |
| 3. Serum electrolytes, blood glucose and urea nitrogen. |
| 4. Prothrombin time. |
| 5. Salicylate level. |
| 6. Blood gases. |
| 7. SGOT; blood ammonia. |

Recent studies show improved outcome with the utilization of peritoneal dialysis and/or exchange transfusion.^{3,4} It is postulated that both these modes of therapy remove toxic substances; early institution of therapy is required, however, since results are uniformly poor in patients who have reached stage IV coma.

Initial therapy should include maintenance intravenous fluids (dextrose 10%, one-third normal saline), and slow replacement of calculated fluid deficits.⁴ Decadron may be administered to help control cerebral edema, and mannitol may be required if signs of rapid progression with impending cerebellar herniation develop. Once liver function abnormalities have been confirmed, 5-10 mg of vitamin K should be administered intramuscularly. To reduce ammonia production, sterilization of the bowel is accomplished by the administration of neomycin by mouth (250-500 mg every six hours), and by cleansing enemas (500 mg neomycin in 150 cc of normal saline). Hyperkalemia, if marked, may be treated by using appropriate exchange resins.

The prognosis for patients who survive the acute insult of this disorder is quite good. Liver function studies frequently return to normal range in a week. Few patients suffer any serious sequelae from the encephalopathy, unless brainstem function was severely compromised during the acute phase. A high index of suspicion is needed if one is to recognize, treat early, and hopefully reduce mortality in this syndrome.

REFERENCES

1. Reye RDC, Morgan G and Baral J: Encephalopathy and fatty degeneration of the viscera. *Lancet* 2:749, 1963.
2. Morbidity and Mortality Weekly Report (CDC, USPHS) 23:115, 1974.
3. Samaha FJ, Blau EB and Berardinelli J: Reye's syndrome: Clinical diagnosis and treatment with peritoneal dialysis. *Pediatrics* 53:336, 1974.
4. Huttenlocher PR: Reye's syndrome: Relation of outcome to therapy. *J Pediatr* 80:845-850, 1972.
5. Huttenlocher PR, Schwartz AD and Klatskin G: Reye's syndrome: Ammonia intoxication as a possible factor in encephalopathy. *Pediatrics* 43:443, 1969.
6. Bourgeois C, Olson L, Comer D, et al: Encephalopathy and fatty degeneration of the viscera: A clinicopathologic analysis of 40 cases. *Am J Clin Pathol* 56:558, 1971.
7. Glick TH, Likosky WH, Levitt LP, et al: Reye's syndrome: An epidemiologic approach. *Pediatrics* 46:371, 1970.
8. Reynolds DW, Riley HD, La Font DS, et al: An outbreak of Reye's syndrome associated with Influenza B. *J Pediatr* 80:429, 1972.
9. Crocker JFS, Rozee KR, Ozere RL, et al: Insecticide and viral interaction as a cause of fatty visceral changes and encephalopathy. *Pediatr Res* 8:423, 1974.
10. Ray CG: Personal communication.
11. Glasgow AM, Cotton RB and Dhiensiri K: Reye's syndrome. I. Blood ammonia and consideration of the non-histologic diagnosis. *Am J Dis Child* 124:827, 1972. ☘

MAY 1975: HIGH BLOOD PRESSURE MONTH

In the United States hypertension is a major causal factor in an estimated 250,000 deaths and many of the more than 1,500,000 heart attacks and strokes that occur each year. Yet, once detected, this disease can often be effectively controlled.

When you analyze all of the studies and reports on high blood pressure, and boil them down to a few short statements, here's what they say:

- High blood pressure is common: 15% to 20% of the adult U.S. population have the disease.
- High blood pressure is dangerous: it is a leading cause of stroke, heart disease, and kidney disease.
- Treatment reduces the danger: in most people, high blood pressure can be lowered and kept under control with continuing treatment. This greatly reduces the risk of serious complications.
- High blood pressure usually doesn't cause symptoms. The only way to know whether your blood pressure is high is to have it read. The fact that you feel fine is no assurance your blood pressure is okay.

Although additional research may discover the causes and thus lead to cures for high blood pressure, the fact is that we now have both the knowledge and medications to control this silent killer effectively. The treatment of high blood pressure is simple and effective, and may consist of medication, diet modification, and weight control. With these points in mind, the importance of receiving regular checkups for high blood pressure cannot be overemphasized. During May 1975 — High Blood Pressure Month — members of the Navy Medical Department can do much to alert the Navy family to the dangers of high blood pressure. ☘



HIGH BLOOD PRESSURE MONTH

Cholesterol and Saturated Fat in the Military Diet: A Computerized Menu Analysis

By LT Steven R. Lamar, MSC, USN*

and

LTJG Gregory M. Gibbons, MSC, USNR†

Maintaining the health of the working force is essential for the successful accomplishment of any organization's mission. The personal tragedy and disruption of careers that occurs when skilled technicians, competent administrators, and effective leaders are stricken with disease is matched by loss of functional efficiency within the organization itself. If personnel are lost during the years of their peak productivity and responsibility, the impact is even greater.

Of all the major diseases atherosclerosis, and its secondary manifestations such as coronary artery disease, are most apt to strike this peak-productivity age group.¹ Since proper nutrition plays an important preventive role, military food-service operations must develop ways to meet the nutritional needs of their patrons, while controlling the intake of cholesterol and saturated fat when indicated.

Serving the patron what he wants to eat, and providing a nutritionally complete diet are primary goals of any military food-service program. Unfortunately, good nutrition is not always achieved by the exercise of individual food preferences. The diet of hamburgers, French-fried potatoes, and a soda that is so popular with many young servicemen and women may meet

food-preference requirements, but it does not satisfy daily nutrient needs. Moreover, satisfying basic nutritional recommendations does not necessarily fulfill the obligation of providing a diet which encourages optimal health and prevention of disease. Malnutrition may take many forms. For example, overnutrition in the form of too great a consumption of calories, cholesterol, saturated fat, or sucrose may be as physically deleterious as undernutrition.

Because a significant number of personnel are lost to the military each year due to atherosclerotic diseases,² preventive measures should be implemented to combat this problem. Although subjecting any population to a diet completely limited in cholesterol and saturated fat is not believed to be justified, providing viable dietary options, through the free choice of available foods, is an accepted and appropriate means of dietary modification.

METHODOLOGY

Recognizing the need for information about the nutrient, cholesterol, and saturated-fat content of meals available to military personnel, we analyzed the menu cycle of the hospital mess at the National Naval Medical Center (NNMC), Bethesda, Md., using a computer program developed by Dr. Joseph Balintfy of the University of Massachusetts. The program provided quantitative data for 17 predetermined dietary factors: calories, protein, fat, saturated fatty acid (SFA), oleic

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acid, linoleic acid, cholesterol, carbohydrate, calcium, iron, sodium, potassium, vitamin A, thiamine, riboflavin, niacin, and vitamin C. Nutrient information was obtained from the U.S. Department of Agriculture Handbook No. 8, *Composition of Foods*.³

Since the NNMC menus offer a choice of foods, we decided to demonstrate and define potential quantitative ranges of nutrients, based on certain preselected food choices available from the menu cycle. Food choices were based on two combinations of menu items, as defined by the following parameters:

- Selected food combinations representing theoretical *minimum* cholesterol and saturated-fat content of the menu. (See Figure 1.)

- Selected food combinations representing theoretical *maximum* cholesterol and saturated-fat content of the menu. (See Figure 2.)

Selected food items did not represent the *absolute* minimum and maximum amounts of cholesterol and saturated fat that might be chosen from the available menu; rather, they indicated the *approximate* ranges of these nutrients contributed by food combinations consistent with good meal-planning techniques (e.g., although low in cholesterol, baked fish was not chosen as the entree for each meal analyzed). We chose one menu for analysis from each week of a five-week menu-planning cycle. Selections were based on the assumption that patrons would select at least one food item from each major menu category (i.e., one entree, one vegetable, one salad, etc.). Food portions represent the "standard portions" defined by each standardized Navy recipe. Based on a review of daily-ration records, we assumed that three cups of milk (24 oz.), three slices of bread, and four pats of butter or margarine would also be consumed each day.

We made no attempt to evaluate the actual food intake of the dining-room patrons. Instead, the nutrient-contributing range of the menus was evaluated, with particular emphasis on minimum and maximum cholesterol and saturated-fat content.

RESULTS

In Figure 3 the average nutrient data for the five menus, representing both the minimum and maximum cholesterol and saturated-fat food combinations, are summarized. On comparing the eight "leader nutrients" (protein, calcium, iron, vitamin A, thiamine, riboflavin, niacin, and vitamin C) from each five-day nutrient average, with the recommended dietary allowances⁴ and the nutritional standards⁵ of the medical services, we see that the recommended allowances for these key nutrients are exceeded.

The average cholesterol-contributing potential of the menus ranged from a low of 199 mg/day for the minimum cholesterol and saturated-fat food combinations, to a high of 1205 mg/day for the maximum. The average ratio of polyunsaturated fat to saturated fat (P/S ratio) was approximately 1:1 (32 gm linoleic acid:33 gm SFA) for the minimum cholesterol and saturated-fat food combinations; the P/S ratio was approximately 1:2 (36 gm linoleic acid:73 gm SFA) for menus representing the maximum cholesterol and saturated-fat food combinations.

DISCUSSION

Our analysis of NNMC menus clearly indicates that the amounts of key nutrients being provided exceed current recommendations, thereby suggesting the overall nutritional adequacy of the meals served. Although the average calorie levels of these menus exceed the recommended daily allowance, we believe that this level is a result of the predetermined food combinations selected for analysis, and does not necessarily reflect the average caloric intake of individual patrons. If an individual's caloric intake is decreased to coincide with energy expenditure, the intake of other nutrients also will be affected; however, such caloric conservation can be achieved by decreasing animal fat and sucrose intake, without sacrificing the levels of important nutrients.

The quantitative nutrient intake of patrons will obviously differ depending upon what foods are consumed. These differences are vividly apparent upon comparing the extreme variability in cholesterol and saturated-fat content of the preselected menus at NNMC. (See Figure 3.) If the controlled fat-cholesterol potential of the menus is to be realized, patrons must have the knowledge and the will to make appropriate food selections. With wise selection of foods, cholesterol intake can be limited to less than 300 mg/day; the ratio of polyunsaturated fat to saturated fat will be close to 1:1, as recommended by the American Heart Association.⁶

Cholesterol and saturated-fat intake can be significantly altered by making relatively minor changes in food selections. Consider, for example, the patron who drinks three cups of whole milk and eats four pats of butter each day, while consuming two eggs for breakfast and using Thousand Island dressing on his salad. If instead he would drink three cups of *skim* milk, use four pats of *margarine*, eat *cereal* for breakfast, and use *Italian* salad dressing, his daily cholesterol intake could be reduced by approximately 600 mg, and his saturated-fat intake reduced by approximately

B R E A K F A S T M E N U

FRUIT OR JUICE	<input checked="" type="checkbox"/> Grapefruit Half <input type="checkbox"/> Chilled Orange Juice
CEREALS	Choice of One <input type="checkbox"/> CORN FLAKES <input type="checkbox"/> PRODUCT 19 <input type="checkbox"/> SHREDDED WHEAT <input type="checkbox"/> SUGAR SMACKS <input type="checkbox"/> FROSTED FLAKES <input type="checkbox"/> BRAN FLAKES <input type="checkbox"/> RICE KRISPIES <input checked="" type="checkbox"/> RAISIN BRAN <input type="checkbox"/> PUFFED WHEAT <input type="checkbox"/> PUFFED RICE <input type="checkbox"/> Cream of Rice <input type="checkbox"/> APPLE JACKS
EGGS	Check Items Desired <input type="checkbox"/> SCRAMBLED <input type="checkbox"/> 1 or <input type="checkbox"/> 2 <input type="checkbox"/> OVER EASY <input type="checkbox"/> 1 or <input type="checkbox"/> 2 <input type="checkbox"/> OVER WELL <input type="checkbox"/> 1 or <input type="checkbox"/> 2 <input type="checkbox"/> SUNNY SIDE <input type="checkbox"/> 1 or <input type="checkbox"/> 2
ACCOMPANIMENT	Check Items Desired <input type="checkbox"/> Grilled Canadian Bacon or <input type="checkbox"/> Grilled Bologna <input type="checkbox"/> Orange French Toast <input type="checkbox"/> Fried Grits <input checked="" type="checkbox"/> Jelly Doughnut
BREADS	Indicate if additional sugar is desired. <input type="checkbox"/> CATSUP <input type="checkbox"/> MUSTARD <input type="checkbox"/> SUGAR <input type="checkbox"/> 2 TOAST <input type="checkbox"/> 2 MARGARINE <input type="checkbox"/> JELLY <input checked="" type="checkbox"/> JAM <input type="checkbox"/> HONEY <input type="checkbox"/> SYRUP <input type="checkbox"/> PEANUT BUTTER <input type="checkbox"/> BUTTER
BEV	<input checked="" type="checkbox"/> COFFEE <input type="checkbox"/> TEA <input type="checkbox"/> COFFEE CREAM <input type="checkbox"/> WHOLE MILK <input checked="" type="checkbox"/> SKIM MILK <input type="checkbox"/> BUTTERMILK <input type="checkbox"/> CHOCOLATE MILK

L U N C H M E N U

SOUP	<input checked="" type="checkbox"/> Chicken Noodle Soup <input checked="" type="checkbox"/> Crackers <input type="checkbox"/> Grilled Minute Steak on a Deli Roll <input type="checkbox"/> Fish & Chips Plate <input type="checkbox"/> Tartar Sauce <input type="checkbox"/> Grilled Frankfurter on a Roll <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Oven Broiled Halibut Steak <input type="checkbox"/> Lemon Butter <input checked="" type="checkbox"/> Baked Manicotti w/Meat Sauce <input type="checkbox"/> Sweet and Sour Pork over Rice
ENTREES	<input checked="" type="checkbox"/> Fluffy Rice <input type="checkbox"/> Baked Acorn Squash <input checked="" type="checkbox"/> Savory Green Beans
VEGS	Choice of One <input type="checkbox"/> Cottage Cheese & Orange Sections <input checked="" type="checkbox"/> Perfection Salad
DESSERTS	DRESSINGS <input checked="" type="checkbox"/> Salad Dressings <input type="checkbox"/> Italian <input type="checkbox"/> Thousand Island <input type="checkbox"/> Blue Cheese
SALADS	Choice of One <input type="checkbox"/> Egg Custard Pie <input checked="" type="checkbox"/> Chocolate Pudding w/Topping
DESSERTS	Indicate if additional sugar is desired. <input type="checkbox"/> RELISH <input type="checkbox"/> MUSTARD <input type="checkbox"/> CATSUP <input type="checkbox"/> DOUBLE SUGAR
BREADS	<input checked="" type="checkbox"/> WHITE <input type="checkbox"/> WH WHEAT <input type="checkbox"/> RYE <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> MARGARINE <input type="checkbox"/> JELLY <input type="checkbox"/> JAM <input type="checkbox"/> PEANUT BUTTER <input type="checkbox"/> BUTTER
BEV	<input type="checkbox"/> COFFEE <input type="checkbox"/> TEA <input type="checkbox"/> COFFEE CREAM <input type="checkbox"/> WHOLE MILK <input checked="" type="checkbox"/> SKIM MILK <input type="checkbox"/> BUTTERMILK <input type="checkbox"/> CHOCOLATE MILK <input checked="" type="checkbox"/> ORANGE DRINK

D I N N E R M E N U

ENTREES	Choice of One <input type="checkbox"/> Oven Roast Rare Beef <input type="checkbox"/> Au Jus <input type="checkbox"/> Seafood Newburg on a Rusk <input checked="" type="checkbox"/> Chicken Cacciatore <input type="checkbox"/> Baked Ham Loaf <input type="checkbox"/> Pineapple Sauce
VEGS	<input checked="" type="checkbox"/> Snowflake Potatoes <input checked="" type="checkbox"/> Peas and Carrots <input type="checkbox"/> Cauliflower Buds
SALADS	Choice of One <input checked="" type="checkbox"/> Garden Green Salad <input type="checkbox"/> Apple Raisin Salad DRESSINGS <input type="checkbox"/> Salad Dressing <input checked="" type="checkbox"/> Italian <input type="checkbox"/> Thousand Island <input type="checkbox"/> Blue Cheese
DESSERTS	Choice of One <input type="checkbox"/> Devil's Food Cake <input checked="" type="checkbox"/> Ice Cream
BREADS	Indicate if additional sugar is desired. <input checked="" type="checkbox"/> Dinner Roll <input type="checkbox"/> CATSUP <input type="checkbox"/> MUSTARD <input type="checkbox"/> SUGAR <input type="checkbox"/> WHITE <input type="checkbox"/> WH WHEAT <input type="checkbox"/> RYE <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> MARGARINE <input type="checkbox"/> JELLY <input type="checkbox"/> JAM <input type="checkbox"/> PEANUT BUTTER <input type="checkbox"/> BUTTER
BEV	<input checked="" type="checkbox"/> COFFEE <input type="checkbox"/> TEA <input type="checkbox"/> COFFEE CREAM <input type="checkbox"/> WHOLE MILK <input checked="" type="checkbox"/> SKIM MILK <input type="checkbox"/> BUTTERMILK <input type="checkbox"/> CHOCOLATE MILK <input type="checkbox"/> ORANGE DRINK

Figure 1.—Minimum cholesterol and saturated-fat food combinations. (References to brand names may not be construed to imply product preference or endorsement by the U.S. Navy, or the naval service at large.)

M E N U		B R E A K F A S T M E N U		L U N C H M E N U		D I N N E R M E N U	
FRUIT OR JUICE		<input checked="" type="checkbox"/> Grapefruit Half <input type="checkbox"/> Chilled Orange Juice		SOUP		<input checked="" type="checkbox"/> Chicken Noodle Soup <input checked="" type="checkbox"/> Crackers	
CEREALS		<u>Choice on One</u> <input type="checkbox"/> CORN FLAKES <input type="checkbox"/> PRODUCT 19 <input type="checkbox"/> SHREDDED WHEAT <input type="checkbox"/> SUGAR SMACKS <input type="checkbox"/> FROSTED FLAKES <input type="checkbox"/> BRAN FLAKES <input checked="" type="checkbox"/> RICE KRISPIES <input type="checkbox"/> RAISIN BRAN <input type="checkbox"/> PUFFED WHEAT <input type="checkbox"/> PUFFED RICE <input type="checkbox"/> Cream of Rice <input type="checkbox"/> APPLE JACKS		ENTREES		<input type="checkbox"/> Grilled Minute Steak on a Deli Roll <input type="checkbox"/> Fish & Chips Plate <input type="checkbox"/> Tartar Sauce <input type="checkbox"/> Grilled Frankfurter on a Roll <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Oven Broiled Halibut Steak <input type="checkbox"/> Lemon Butter <input type="checkbox"/> Baked Manicotti w/Meat Sauce <input checked="" type="checkbox"/> Sweet and Sour Pork over Rice	
EGGS		<u>Check Items Desired</u> <input checked="" type="checkbox"/> SCRAMBLED <input type="checkbox"/> 1 or <input checked="" type="checkbox"/> 2 <input type="checkbox"/> OVER EASY <input type="checkbox"/> 1 or <input type="checkbox"/> 2 <input type="checkbox"/> OVER WELL <input type="checkbox"/> 1 or <input type="checkbox"/> 2 <input type="checkbox"/> SUNNYSIDE <input type="checkbox"/> 1 or <input type="checkbox"/> 2		VEGS		<input type="checkbox"/> Fluffy Rice <input checked="" type="checkbox"/> Baked Acorn Squash <input type="checkbox"/> Savory Green Beans	
ACCOMPANIMENT		<u>Check Items Desired</u> <input type="checkbox"/> Grilled Canadian Bacon or <input type="checkbox"/> Grilled Bologna <input checked="" type="checkbox"/> Orange French Toast <input type="checkbox"/> Fried Grits <input type="checkbox"/> Jelly Doughnut		DESSERTS		<u>Choice of One</u> <input checked="" type="checkbox"/> Cottage Cheese & Orange Sections <input type="checkbox"/> Perfection Salad <u>DRESSINGS</u> <input type="checkbox"/> Salad Dressing <input type="checkbox"/> Italian <input type="checkbox"/> Thousand Island <input type="checkbox"/> Blue Cheese	
BREADS		Indicate if additional sugar is desired. <input type="checkbox"/> CATSUP <input type="checkbox"/> MUSTARD <input type="checkbox"/> SUGAR <input type="checkbox"/> TOAST <input type="checkbox"/> MARGARINE <input type="checkbox"/> JELLY <input type="checkbox"/> JAM <input type="checkbox"/> HONEY <input checked="" type="checkbox"/> SYRUP <input type="checkbox"/> PEANUT BUTTER <input type="checkbox"/> 2 BUTTER		BREADS		<u>Choice of One</u> <input checked="" type="checkbox"/> Egg Custard Pie <input type="checkbox"/> Chocolate Pudding w/Topping	
BEV		Indicate if additional sugar is desired. <input type="checkbox"/> CATSUP <input type="checkbox"/> MUSTARD <input type="checkbox"/> SUGAR <input type="checkbox"/> RELISH <input type="checkbox"/> MUSTARD <input type="checkbox"/> CATSUP <input type="checkbox"/> DOUBLE SUGAR		BEV		<u>Choice of One</u> <input checked="" type="checkbox"/> Egg Custard Pie <input type="checkbox"/> Chocolate Pudding w/Topping	
BEV		<input checked="" type="checkbox"/> COFFEE <input type="checkbox"/> TEA <input type="checkbox"/> COFFEE CREAM <input checked="" type="checkbox"/> WHOLE MILK <input type="checkbox"/> SKIM MILK <input type="checkbox"/> BUTTERMILK <input type="checkbox"/> CHOCOLATE MILK		BEV		<input type="checkbox"/> COFFEE <input type="checkbox"/> TEA <input type="checkbox"/> COFFEE CREAM <input checked="" type="checkbox"/> WHOLE MILK <input type="checkbox"/> SKIM MILK <input type="checkbox"/> BUTTERMILK <input type="checkbox"/> CHOCOLATE MILK <input type="checkbox"/> ORANGE DRINK	

Figure 2.—Maximum cholesterol and saturated-fat food combinations. (References to brand names may not be construed to imply product preference or endorsement by the U.S. Navy, or the naval service at large.)

24 gm. These food substitutions alone could reduce total daily cholesterol intake by more than 50%, and significantly alter the P/S ratio.

CONCLUSIONS

This study demonstrates the importance of proper food selection in controlling the cholesterol and saturated-fat content of meals. Military food-service managers must assure that foods are provided which will meet the nutritional and health-maintenance needs of dining-hall patrons, while satisfying individual food preferences.

Nutrient	A	B	C*	D†
Calories	3246	3950	3000	3400
Protein (gm)	112.6	148.7	54	100
Fat (gm)	124.0	198.6	**	not to exceed 40% of daily caloric intake
SFA (gm)	33	73	**	††
Oleic Acid (gm)	46	72	**	††
Linoleic Acid (gm)	32	36	**	††
Cholesterol (mg)	199	1205	**	††
Carbohydrate (gm)	431.5	404.5	**	††
Calcium (mg)	1608	1671	800	800
Iron (mg)	21.9	23.7	10	14
Sodium (mg)	7094	8588	**	††
Potassium (mg)	4306	4515	**	††
Vitamin A (IU)	13882	14466	5000	5000
Thiamine (mg)	2.23	2.38	1.5	1.7
Riboflavin (mg)	3.22	3.81	1.8	2.0
Niacin (mg)	24.4	25.1	20	22
Vitamin C (mg)	158	129	45	60
A: Minimum Cholesterol, Saturated-Fat Food Combinations (five-day average).				
B: Maximum Cholesterol, Saturated-Fat Food Combinations (five-day average).				
C: Recommended Dietary Allowances. ⁷				
D: Medical Services Nutritional Standards. ⁵				
*Values for men, 19-22 years of age.				
**No established recommended daily allowance.				
†Values for men.				
††No established standard.				

Figure 3.—Average nutrient data: minimum and maximum cholesterol and saturated-fat food combinations.

Because of strong epidemiologic evidence relating prolonged dietary excesses of cholesterol and saturated fats to elevated serum lipid levels, and to an increased risk of atherosclerotic disease,⁶⁻¹¹ implementation of appropriate dietary modifications must be considered, along with other preventive measures, if the incidence of this disease is to be decreased. For this goal to be realized, however, appropriate foods must be available in all military food-service operations both ashore and afloat, not just in hospital messing facilities; patrons must know enough about nutrition and proper food selection to make wise choices. Health and nutrition education programs are therefore an essential part of this preventive medicine effort.

Our computerized analysis of NNMC menus demonstrates that when patients are given a selection of appropriate foods, and when they have sufficient knowledge to make correct choices, cholesterol and saturated-fat intake can be controlled without compromising other important nutritional considerations.

REFERENCES

1. Vieweg WVR, Lee DA: Coronary artery disease — its impact on naval and Marine Corps personnel. *Milit Med* 139: 187, 1974.
2. Steck M: Atherosclerosis prevention — a proposed risk factor analysis. *US Nav Med* 63:30, Mar 1974.
3. *Composition of Foods*, Agricultural Handbook No. 8, Agricultural Research Service, US Dept of Agriculture.
4. *Recommended Dietary Allowances*, 8th revised ed., Food and Nutrition Board, National Research Council, National Academy of Sciences, Washington, D.C., 1973.
5. Medical Services Nutritional Standards, BUMEDINST 10110.3D, Dept of the Navy, 10 Aug 1972.
6. *Diet and coronary heart disease — a statement for physicians by the Central Committee for Medical and Community Programs*, American Heart Association, New York, 1973.
7. Diet and coronary heart disease — a joint policy statement of the AMA Council on Foods and Nutrition, and the Food and Nutrition Board of the National Academy of Science, National Research Council. *JAMA* 222:1647, 1972.
8. Doyle JT, Kannel WB: Coronary risk factors: 10-year finding in 8600 Americans — Pooling Project, Council on Epidemiology, American Heart Association. Paper presented to the VI World Congress of Cardiology, London, Sept 1970.
9. Page IH, Stamler J: Diet and coronary heart disease. *Mod Concepts Cardiovasc Dis* 37:119/125, 1968.
10. Stamler J, Lilienfeld J: Primary prevention of atherosclerotic diseases. *Circulation* 42:A-55, 1970.
11. *Risk factors and coronary disease — a statement for physicians by the Central Committee for Medical and Community Programs*, American Heart Association, New York, 1968.

Acute Renal Failure with Extreme Catabolism in a 19-Year-Old Male

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Acute renal failure is a clinical syndrome encompassing a wide variety of diseases. In most large series,^{1,2,3} the majority of cases reported are secondary to acute tubular necrosis. The clinical features of this entity have been well described⁴ and do not bear repeating in detail. However, in general, the blood urea nitrogen (BUN) and serum creatinine levels rise proportionately; the urine sodium concentration is moderately high, and does not fall to low levels with volume contraction or sodium restriction. The present case report is that of a young man with posttraumatic acute renal failure who demonstrated an acutely catabolic state, losing more than 30 kg in 30 days, and who, despite intensive dialysis as corroborated by relatively normal serum creatinine concentrations, continued to present extremely high BUN levels. In addition, during both the late oliguric and diuretic phases, the urine sodium rarely exceeded 10 mEq/liter.

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The opinions and assertions contained herein are those of the authors and are not to be construed as official, or as necessarily reflecting the views of the Navy Department, or the naval service at large. Any references to commercial items or sources are not intended to imply product endorsement by the U.S. Navy, or the naval service at large.

Reprint requests should be addressed to Publications Office, Clinical Investigation Center, Naval Regional Medical Center, Oakland, Calif. 94627.

CASE REPORT

A 19-year-old male was admitted to the Naval Regional Medical Center, Oakland, Calif., after having leaped from a seventh-floor window in an apparent suicide attempt. When discovered, he was comatose and without a discernible blood pressure. There was no history of drug use, or personal or family history of renal, hypertensive, or cardiovascular disease.

Initial physical examination revealed a comatose patient with spontaneous respirations, a pulse rate of 140/minute, a blood pressure reading of 70 mm Hg, and a respiratory rate of 40/minute. Other pertinent physical findings included: unequal pupils, with the right pupil appearing significantly larger than the left; both pupils reacted to light and accommodation. The abdomen was not distended, no bruits were heard, and there were no bowel sounds. There was an obvious fracture of the right arm. Neurological evaluation revealed a comatose male who did not respond to deep pressure or pain stimuli.

Laboratory data included: a hemoglobin of 14 g/100 ml, hematocrit of 40 VPC, and WBC 10,000/cu mm, with differential count of 70% polymorphonuclear leukocytes, 7% bands, and 23% lymphocytes. The serum creatinine was 1.0 mg/100 ml, blood urea nitrogen (BUN) 22 mg/100 ml, blood glucose 198 mg/100

ml, serum sodium 141 mEq/liter, serum potassium 4.3 mEq/liter, bicarbonate 24 mEq/liter, and chloride 101 mEq/liter. Arterial pH was 7.39, PCO_2 30 mm Hg, and PO_2 69 mm Hg. Urinalysis revealed numerous red blood cells, and granular and hyaline casts. Urine sodium was 96 mEq/liter.

Chest X-ray examination demonstrated a right lower lobe infiltrate, and a fracture of the right 12th rib. Other fractures were observed in the pubic symphysis, the third lumbar vertebra, the right ischium, and the supracondylar area of the right arm. An emergency excretory urogram study showed poor concentration of the dye in the calyceal system, but no extravasation was observed from any portion of the urinary tract.

On admission to the hospital the patient received four units of whole blood, and four units of plasma. Bilateral carotid arteriogram studies revealed no abnormalities. An abdominal arteriogram revealed a fracture of the upper pole branch of the right renal artery (Figure 1), but was otherwise unremarkable. Exploratory laparotomy revealed a stellate laceration of the left lobe

of the liver, which was repaired. A large retroperitoneal hematoma was observed, but this area was not explored because of the patient's cardiovascular status. During and following surgery, the patient's blood pressure remained low despite the administration of large volumes of blood, plasma, and saline. The patient became oliguric; by the second hospital day the BUN determination had risen to 63 mg/100 ml, and the serum creatinine to 6.8 mg/100 ml. Hemodialysis was initiated on the third hospital day, using a Travenol EXO3 coil for six-hour dialysis periods. The patient was dialyzed daily for the succeeding 33 days, with only two one-day interruptions. Despite intensive dialysis, results of repeated BUN determinations remained above 100 mg/100 ml (Figure 2). When dialysis was interrupted on days 6 and 29, the BUN level rose sharply.

After two weeks of intensive dialysis during which a 20 kg weight loss ensued, the patient entered the diuretic phase of acute renal failure. During this period the urine sodium concentration remained below 20 mEq/liter, and usually below 10 mEq/liter (Figure 2).

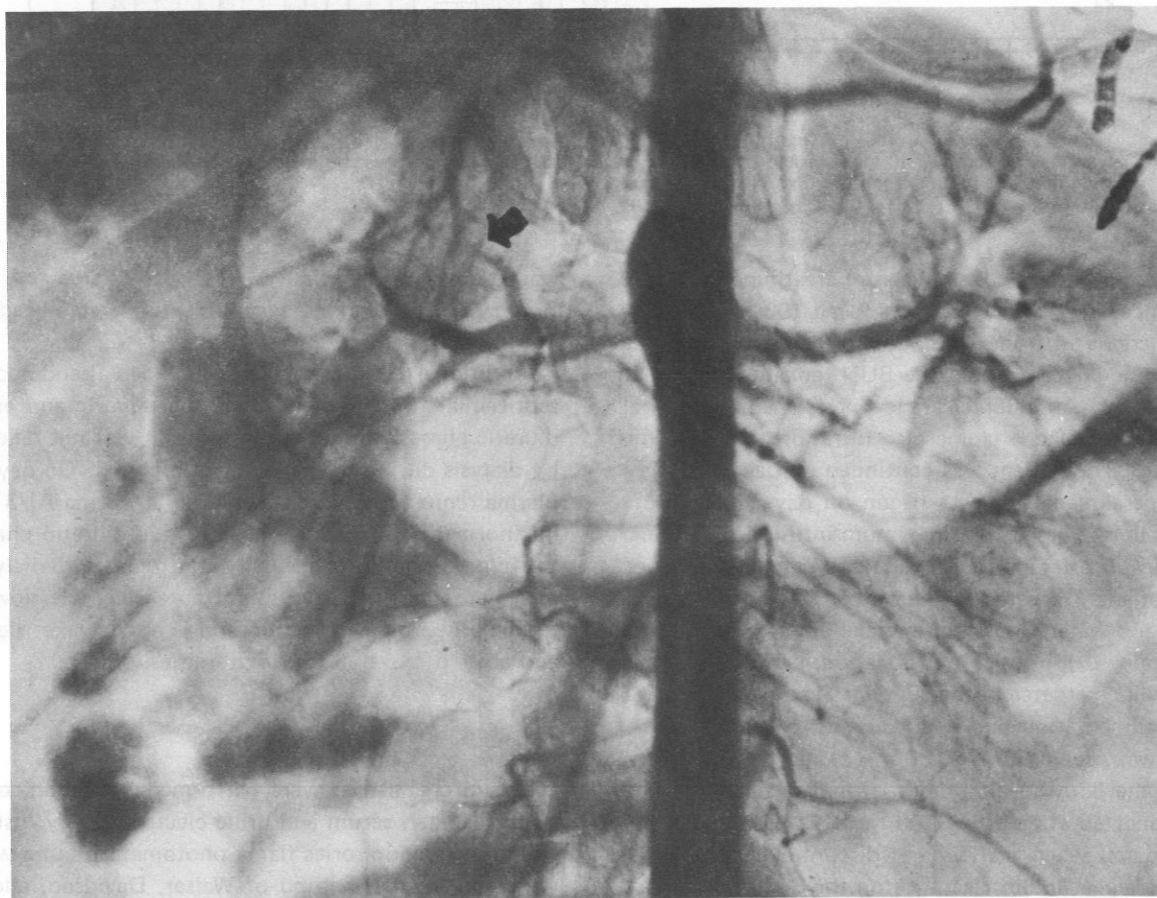


Figure 1.—Arteriogram on admission. The vasculature of the left kidney appears unremarkable. The fractured vessel supplying the upper pole of the patient's right kidney is marked by an arrow.

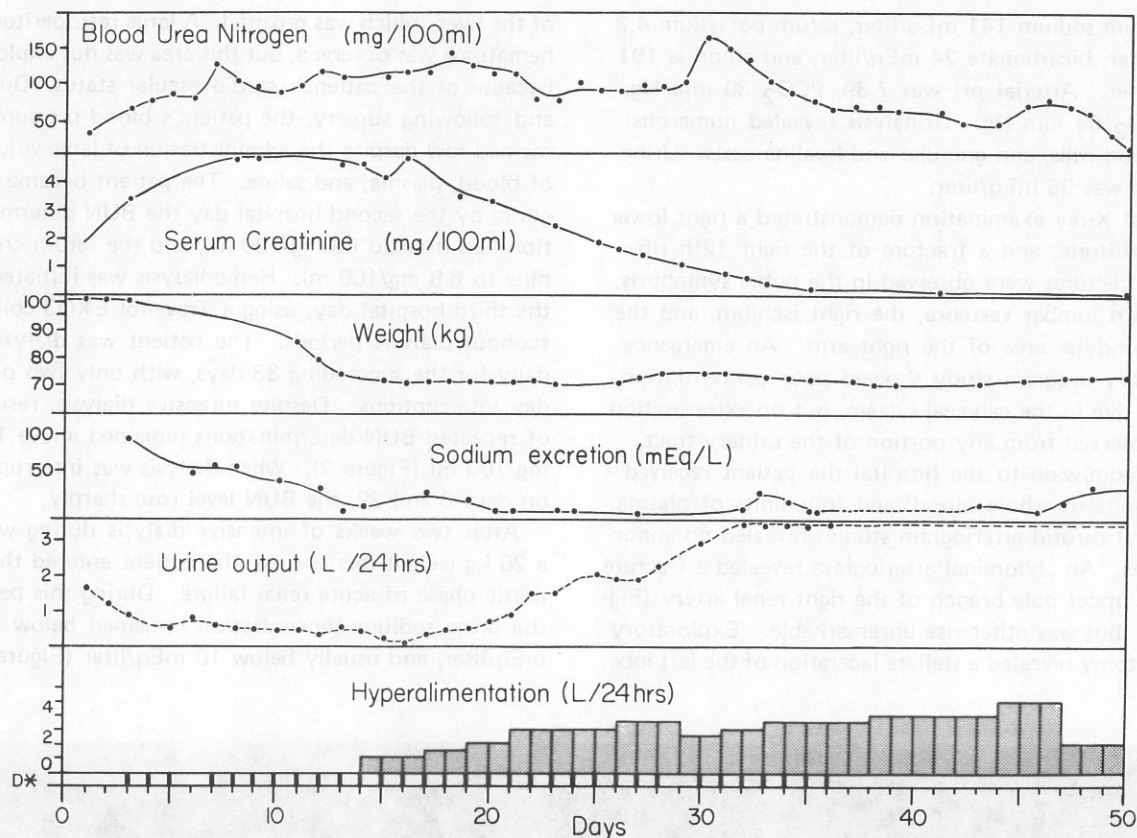


Figure 2.—Hospital Course. Time in days is designated by vertical lines placed below the lowest horizontal line. Dialysis was performed on days marked by the heavier vertical lines placed above the lowest horizontal line. The remaining portions of the graph are discussed in the text.

At this time the predialysis serum creatinine decreased to concentrations of less than 2 mg/100 ml. Despite the increase in urine volume and decrease in serum creatinine concentration, the BUN remained above 100 mg/100 ml. An inulin clearance, performed on hospital day 30, revealed a glomerular filtration rate of 5 ml/minute. The patient was continued on daily dialysis.

Hyperalimentation was begun on day 14 and was gradually increased to a maximum infusion of 5 liters/day, in an attempt to decrease the catabolic state of the patient. Hyperalimentation consisted of 50% dextrose and water, and a commercial amino-acid mixture (Freamine®), infused over a 24-hour period through an indwelling catheter in the superior vena cava. Despite hyperalimentation and daily dialysis, the predialysis BUN was usually 90 mg/100 ml, or more (Figure 2).

On the 35th hospital day the predialysis BUN value was reported at less than 100 mg/100 ml, and continued to fall when dialysis was discontinued two days later. Repeat inulin clearance on the 37th hospital day demonstrated a glomerular filtration rate of 60 ml/minute. On days 45 through 50, hyperalimentation

was gradually discontinued. The BUN value fell to 6.0 mg/100 ml, and the serum creatinine stabilized at 0.8 mg/100 ml.

Additional clinical problems included *Pseudomonas* septicemia throughout most of the oliguric and early diuretic phases, and hypertension that was not relieved by dialysis during the early oliguric phase. On day 9, plasma renin activity was measured at 23 mg AI/3 hr/ml (normal < 5 mg/ml/3 hr). In mid-diuretic phase the hypertension became easily controlled with dialysis, and the patient is currently normotensive. He slowly regained neurologic function and is now awake, alert, and able to move all four extremities.

METHODS

Serum chemistries were performed by Technicon AutoAnalyzer, serum and urine electrolytes by Instrumentation Laboratories flame photometer; inulin was measured by the method of Walser, Davidson, and Orloff,⁵ and plasma renin activity by radioimmunoassay.

DISCUSSION

The case presented illustrates several phenomena not ordinarily observed in posttraumatic acute renal failure.

Intense Catabolic State. The presence of a hypercatabolic state was documented by several observations. First, the patient lost approximately one kilogram body weight per day over a period of one month. This is in contrast to the more routinely observed weight loss, in acute renal failure, of 300 grams per day.⁴ In an attempt to reduce the catabolism, hyperalimentation fluid containing glucose and free amino acids was administered daily, and was associated with a decrease in daily weight loss. Second, intensive daily hemodialysis employing a Travenol EXO3 coil for six-hour periods was unsuccessful in lowering the BUN below 90 mg/100 ml. In fact (Figure 2), on the two days in which dialysis was not performed (days 6, 29), the predialysis BUNs on the following days were observed to be 150 and 160 mg/100 ml, respectively. Two possible explanations for predialysis BUN levels over 90 mg/100 ml, in a patient undergoing daily dialysis, might obtain. Either dialysis was inadequate on the preceding day, or an intense catabolic state existed. Arguing against the first of these possibilities is the observation that the serum creatinine was 2-3 mg/100 ml at a time when the inulin clearance was 5 ml/minute, indicating that the serum creatinine was not low as a function of increased filtration rate, but rather because of intensive dialysis. This observation on day 30 was made when the urine output was greater than one liter per day. Three successive days of dialysis were required to reduce the BUN to the 100 mg/100 ml level after dialysis was interrupted for this single day, substantiating the clinical impression of intense urea production exhibited by this patient.

The first observations of "hypercatabolic" acute renal failure were made by Parsons and his coworkers in 1961.⁶ They, and others,^{7,8} advocated early and frequent hemodialysis as the treatment of choice, demonstrating improved results over those reported earlier when only limited dialysis was employed.^{9,10} In 1964 Silva, et al.,¹¹ reported eight cases of hypercatabolic acute renal failure treated with daily hemodialysis. In their series the predialysis urea measurement averaged 154 mg/100 ml, and this level was reduced to a mean of 74 mg/100 ml postdialysis. The predialysis serum creatinine averaged 8 mg/100 ml. By comparing the predialysis creatinine concentrations of these patients with those of the present patient, we may infer that the present patient, with comparable urea concentrations, exhibited a much greater catabolic rate than did the eight patients described by Silva, et al.¹¹

Investigators^{7,8,11} have emphasized that, with intensive dialysis, even the most catabolic patient will often survive if the underlying cause of hypercatabolism (in this case sepsis) is brought under control. The point is well illustrated in the case report of the intensely catabolic patient herein described.

Hyponatremia. The second area in which the present patient differs from the usual case of acute renal failure, is the degree to which sodium reabsorption occurred. Figure 2 graphically depicts successive urine sodium concentrations throughout the patient's course. After day 13, the urine sodium concentration was nearly always 10 mEq/liter, or less. Rare reports in the literature^{12,13} have described patients with hyponatremia during nonoliguric acute tubular necrosis, but to our knowledge this has not been recorded in the case of patients with true oliguric acute renal failure. The hyponatremia bridged the oliguric and diuretic phases of the illness between days 13 and 20, and thus occurred both during a time when tubular function should be at its nadir and during the recovery phase, when gradual return of active energy-requiring processes would be expected.

A possible explanation for this phenomenon would be that the population of nephrons underwent necrosis in a highly selective manner, with the superficial nephron population destroyed to a major extent, and juxtamedullary nephrons retained relatively intact. Supportive evidence for the latter concept would flow from studies conducted during acute tubular necrosis, indicating that there is a redistribution of blood flow away from superficial nephrons.¹⁴ If the juxtamedullary population were to remain relatively intact, oliguria could ensue from either a destruction of the superficial cortical population, or from a massive back diffusion of most of the filtrate formed in these nephrons.¹⁵ Under conditions of volume control with dialysis, the remaining intact nephrons would respond appropriately to volume depletion with resultant hyponatremia. A second contributing factor could be the high renin levels observed in this patient, presumably due to the renal infarction. This might result in afferent arteriolar constriction¹⁶ and increased aldosterone levels, both of which could independently decrease the sodium concentration in the tubular fluid of functioning nephrons.

A third interesting observation was made. This was the marked difference in two inulin clearances performed when BUN and serum creatinine values, and urine outputs, were similar (Table 1). On day 30: the BUN was 100 mg/100 ml, serum creatinine 2 mg/100 ml, urine output 3000 ml/24 hours, and the inulin clearance 5 ml/minute. One week later: the BUN was 110 mg/100 ml, serum creatinine 2.1 mg/100 ml,

TABLE 1.—BIOCHEMICAL PARAMETERS AND INULIN CLEARANCES ON DAYS 30 AND 37

	Day 30	Day 37
BUN (mg/100 ml)	100	110
Serum creatinine (mg/100 ml)	2.0	2.1
Urine volume (ml/24 hr)	1000	1200
C _{inulin} (ml/minute)	5	60

urine output 3500 ml/24 hours, and the inulin clearance 60 ml/minute. This well illustrates the difficulty in estimating glomerular filtration rate in the intensively dialyzed patient, based on determinations of BUN and serum creatinine alone.

SUMMARY

A case of acute renal failure with extreme catabolism and hyponatriuria is described. The necessity of daily hemodialysis and hyperalimentation is emphasized. Possible mechanisms for hyponatriuria in acute renal failure are discussed, and the difficulty in estimating the glomerular filtration rate in the dialyzed patient is illustrated.

REFERENCES

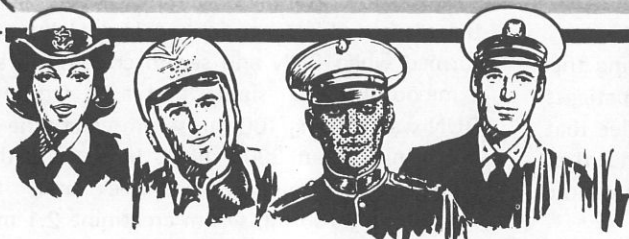
1. Kleinknecht D, Jungers P, Chanard J, et al: Uremic and non-uremic complications in acute renal failure: Evaluation of early and frequent dialysis on prognosis. *Kidney Int* 1:190-196, 1972.
2. Bluemle LW, Webster GD Jr and Elkinton JR: Acute tubular necrosis. *Arch Intern Med* 104:180-197, 1959.
3. Kiley JE, Powers SR Jr and Beebe, RT: Acute renal failure. *N Engl J Med* 262:481-486, 1960.

4. Swann RC, Merrill JP: Clinical course of acute renal failure. *Medicine (Baltimore)* 32:215-292, 1953.
5. Walser M, Davidson DG and Orloff J: The renal clearance of alkali-stable inulin. *J Clin Invest* 34:1520-1523, 1955.
6. Parsons FM, Hobson FM, Blagg CR, et al: Optimum time for dialysis in acute reversible renal failure. Description and value of an improved dialyser with large surface area. *Lancet* 1:129-134, 1961.
7. Murray JS, Hegstom RM, Pendras JP, et al: Continuous flow hemodialysis and bypass cannulas in the management of acute renal failure. *Trans Am Soc Artif Intern Organs* 7:94-99, 1961.
8. Teschan PE, Baxter CR, O'Brien TF, et al: Prophylactic hemodialysis in the treatment of acute renal failure. *Ann Intern Med* 53:992-1016, 1960.
9. Jackson RC, Bunker NV, Elder WJ, et al: Treatment of renal failure in a unit with facilities for haemodialysis (twin-coil artificial kidney). Results with 80 patients. *Br Med J* 5217:1909-1916, 1960.
10. Shackman R, Milne MD and Struthers NW: Oliguric renal failure of surgical origin. *Br Med J* 5211:1473-1482, 1960.
11. Silva H, Pomeroy J, Rae AI, et al: Daily haemodialysis in "hypercatabolic" acute renal failure. *Br Med J* 2:407-410, 1964.
12. Vertel RM, Knochel JP: Nonoliguric acute renal failure. *JAMA* 200:598-602, 1967.
13. Graber IG, Sevitt S: Renal function in burned patients and its relationship to morphological changes. *J Clin Pathol* 12:25-44, 1959.
14. Hollenberg NK, Epstein M, Rosen SM, et al: Acute oliguric renal failure in man: Evidence for preferential renal cortical ischemia. *Medicine (Baltimore)* 47:455-474, 1968.
15. Tanner GA, Sloan KL and Sophasan S: Effects of renal artery occlusion on kidney function in the rat. *Kidney Int* 4:377-389, 1973.
16. Schnermann J, Nagel W and Thureau K: Die frühdistale natriumkonzentration in rattennieren nach renaler ischämie und hämorrhagischer hypotension. *Pflügers Arch* 287:296-310, 1966.



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One of the biggest problems inherent in the management of our student subsidy program is that of "spreading the word." We want each of you to understand, as well as possible, your role and future in the system.

ENS Stephan R. Curry, one of our scholarship students, has helped us immeasurably in this effort. Through a careful analysis of the proceedings of the Sixth Annual Surgeon General's Specialty Advisory Conference and Committees' Meeting, he has presented an interpretation of a student's status and future, as perceived by one who is part of the action.

Our thanks to ENS Curry for his perceptive article, which appears below. Read it carefully. If you have any questions, ask. Get involved. It is only through your interaction with us that we can be responsive to your needs.

THE SCHOLARSHIP STUDENT IN THE NAVY

I imagine that most of us, realizing that we were incurring significant obligations in return for significant benefits, entered our various scholarship programs with at least a little apprehension. When we signed our service agreements our professional futures became irrevocably linked to the Navy. Students attending medical school under the Armed Forces Health Professions Scholarship (AFHPS) Program are required to apply to naval hospitals for their first year of graduate medical

education (GME). If selected for naval training, AFHPS students must accept the offered position, at least for the first year; years spent in Navy GME will not count toward the completion of service obligation. It is, of course, the service obligation, the debt in terms of years, which seems most significant: one year in active-duty status for each year of scholarship support, with a minimum obligation of two years.

For most of us, I think, those misgivings we may have are predicated upon ignorance of what to expect during our sojourn in the Navy. Although clinical clerkships are encouraging, they don't provide all the information we need to allay our anxieties.

Indeed, there seems to be an incredible dearth of information available concerning what we may expect of our early days in Navy medicine. It was immensely gratifying, then, to find, in the December 1974 issue of *U.S. Navy Medicine*, the transcript of the Surgeon General's Sixth Annual Specialties' Advisory Conference and Committees' Meeting (SAC Six). For those who missed it, these are the points which seemed most relevant for scholarship students:

The inception of the Variable Incentive Pay (VIP) Program makes available a bonus of up to \$13,500 a year for each year of active duty over and above the initial obligation. Those of us interested in a Navy career can achieve an initial postobligation income of approximately \$35,000, and ultimately reach an income in the high 40's. If you have incurred an obligation of more than four years of active duty, exclusive of time spent in graduate medical education, you will receive an incentive pay bonus of \$9,000 for each year of obligation over four years. VIP has made the idea of a naval career much more attractive, especially in view of the crisis in malpractice insurance and the myriad complications in private practice.

There was much discussion of moonlighting at SAC Six. In the keynote address, VADM Donald L. Custis, MC, USN, said, "Provisions for [moonlighting] should, must, and will be tightened." While the subject was apparently controversial, a committee of directors of clinical services shared some general opinions. All felt that a single, consistent policy, applicable to all Navy physicians, was needed. The general impression was that the committee disapproved of moonlighting, but at the same time believed that it could not legally be abolished, and that to forbid Navy physicians to spend their free time in this particular way might not be entirely proper. The committee concluded that "performance, or the lack thereof, must be the determining factor upon which the right to moonlight is based."

The Surgeon General is expected to issue, if he has not already done so, a revised and definite policy [see

BUMED Notice 1610 of 22 January 1975, "Remunerative Professional Civilian Employment of Medical Department Officers" (Ed.)]

As you have probably heard, freestanding internships as such will not be approved after 30 June 1975. Instead, the first year of GME will form a part of the continuum of medical education; the first-year program will require approval by the director of an American Medical Association-approved residency program in the specialty to which the new recipient of the MD or DO degree aspires. Programs offered by the Navy range from categorical (preparation for one specific specialty), to flexible (training applicable to two or more specialties). Thus, a medical student who is accepted for and enters a first-year GME Navy program in family practice, obstetrics and gynecology, pathology, psychiatry, or pediatrics is virtually assured of continuing in his specialty until completion of training, contingent upon satisfactory performance. Furthermore, reapplication to continue in those specialties is not required. However, students accepted for all other first-year programs (categorical, categorical diversified, and flexible) in the remaining medical disciplines must reapply early in their first year of GME for continuance in their program, or to request a change to another medical specialty. Navy training statistics indicate that, historically, over 15% of naval interns have chosen to defer continuing in GME; of those who *did* apply for GME during their internship (now GME Year 1), 75-78% were selected to continue training in Navy programs.

Since students graduating this summer will be entering the newly designated categories of first-year programs, it should prove most helpful to assess the SAC *Seven* selection results in October 1975. The actual number of first-year GME physicians who will apply to continue in their same program, or to move into another specialty, cannot be predicted at this time.

At the SAC Six meeting, over 900 applications for graduate training were considered, with the Navy offering more than 200 positions for first-year GME, and over 180 graduate-year, 2-level residency positions.

Who was selected? Of the 238 residency positions available for Fiscal Year 1976 (1 July 1975-30 June 1976), 86 went to naval interns, 119 to medical officers on active duty, and 33 to civilian applicants. (These figures must be interpreted in light of the number of active-duty medical officers who were accepted for first-year positions in the five specialties mentioned earlier.)

Of the 300 Navy-sponsored medical students graduating this spring, it can be expected that 50%, and possibly up to 65%, will be selected for Navy GME programs. This figure varies because of the 230 first-year GME positions available, over 70 (in the five specialties

mentioned above) are open to active-duty physicians as well as to students. If 25 to 30 active-duty physicians are chosen, the total number of positions available for graduating students will be just under 200. Furthermore, since some 60 students graduate annually from the Medical and Osteopathic Student Scholarship Program (1965 students), the total number of students competing for available positions is actually 360. Therefore, some 150 to 170 students will not be selected for Navy programs.

The solution for the first-year of GME is simple: the Navy will permit nonselectees to "intern" at civilian hospitals. Complications arise, however, for students not selected for specialty training. There are two possibilities, depending upon the specialty for which you are applying: (1) if there is a projected requirement in the Navy for your specialty, you may be granted a deferment to complete specialty training in a civilian hospital;* or (2) if there is no such requirement, you will be assigned to active duty as a general medical officer (GMO) upon completion of the first GME year. It is estimated that approximately 15-20% of all medical officers who complete first-year GME will subsequently enter the naval service as GMOs. But there are additional options: reapplication for Navy GME, application for aviation medicine or undersea medicine programs, aerospace medicine residency, or preventive and occupational medicine residencies.

GMOs serve mainly in dispensaries, but may also serve on ships, at Armed Forces Examining and Entrance Stations, or with the Marine Corps, the flying Navy, or construction battalions. In many cases, GMOs have enhanced chances for specialty training after serving only a portion of their active-duty obligation, and may complete their service obligation after specialty training.

What are the chances that a GMO will be put on a ship and forgotten for the entire service obligation? Virtually zero. In fact, under a new plan, the task of fleet support will be parceled out equitably among all medical officers. In effect, medical officers at naval regional medical centers will be part of a fleet support pool. Five medical officers will be assigned to one ship, and will rotate through deployments of no more than 90 days. In a two-year period, ships are normally deployed no longer than 10 to 15 months. It is planned that once an officer has been in the pool two years he may either withdraw or volunteer for another period in the pool. This single-manager concept is now being tested on both the east and west coasts.

*Specialties for which there appear to be large projected requirements are family practice, general internal medicine, pediatrics, anesthesiology, psychiatry, radiology, and pathology.

Since you are reading this, I presume that you have incurred an active-duty obligation of three to seven years. Many of us will spend our internship, residency, and four years of active service in the Navy. Some will make Navy medicine their career. In any event, our qualifications as professionals will undoubtedly be influenced by the quality of medicine practiced in naval hospitals. We should all do our best to maintain the highest standards of medical practice while in uniform. What we do, and how we do it, will determine the value of our naval experience for ourselves, for those who follow us, and ultimately, for our patients.—ENS Stephan R. Curry, USNR, University of Michigan Medical School, Ann Arbor, Mich.

ENS ROBINSON WINS PRIZE FOR PAPER

ENS Felipe C. Robinson, USNR, a Navy-sponsored medical student at the University of Florida College of Medicine, won second prize at the Eastern Student Research Forum, held in Miami 13-14 January 1975. The Forum was sponsored by the Student American Medical Association and the University of Miami.

ENS Robinson's prize-winning paper was entitled, "The Spectral Apexcardiogram: A New Approach to the Quantitation of Precordial Vibrations." His research was conducted at Nav Hosp San Diego, Calif., and was supported by a grant from the Clinical Investigation Center of NAVREGMEDCEN San Diego. 🍀

FIRST CCU CLASS GRADUATES AT NAVAL HOSPITAL MEMPHIS

Eleven nurses and corpsmen have graduated from a two-week course in coronary care at Naval Hospital Memphis, Millington, Tennessee. Designed to develop skills in the interpretation of cardiac arrhythmias using electrocardiograms, the course was sponsored by the Nursing Inservice Education Department, and was planned and directed by LCDR Ellen Stammer (NC), assistant education coordinator. Instructors for the course were LT Marvis Rodgers and LTJG William Richburg, both Nurse Corps officers.

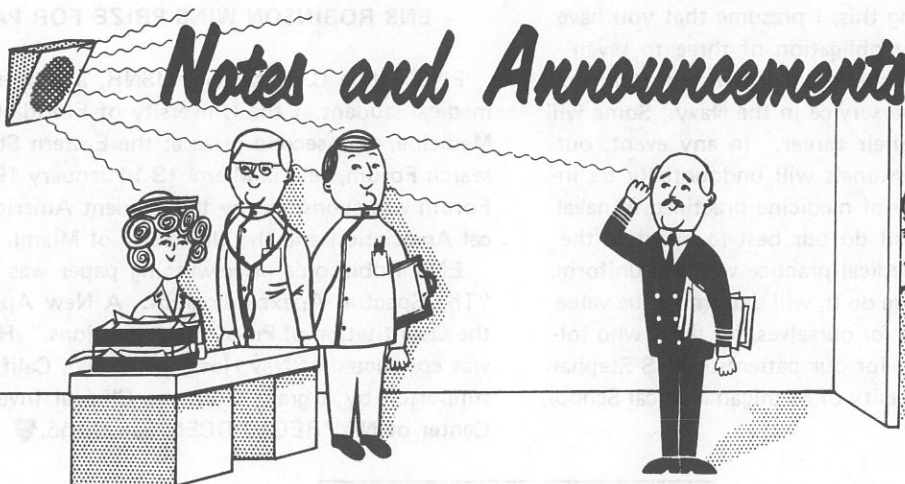
The course included use of visual aids, and provided practice in evaluating cardiac arrhythmias and selecting appropriate therapy. Guest instructor Mrs. Kay Ferrario,

R.N., brought a training device which produced different arrhythmias, requiring decisive action by the students.

Following completion of training, more personnel are available to evaluate and care for cardiac emergencies. Included in the first graduating class were: LCDR M. Parnell, LCDR N. Finkle, LTJG N. Heideman, LTJG E. Hodges, ENS S. Lane, Mrs. N. Smith, R.N. (Civil Service), HM3 Snelling, HN J. King, HN R. Feger, HA T. Lutes, and HA W. Duling. 1LT C. Detwiler and SGT P. Grindstaff, from USAF Hospital, Blytheville, Arkansas, were guests of Naval Hospital Memphis for this course.—PAO, Nav Hosp Memphis. 🍀



ALL HEART—Valentine's Day was graduation day for the first group of students to complete the two-week coronary care course at Naval Hospital, Memphis.



VADM CUSTIS ADDRESSES MEDICAL RESERVISTS

Since 1950, outstanding Navy Medical Corps officers have been invited to speak at the Annual George Washington's Birthday Military Party sponsored by Naval Reserve Medical Company 9-4, Kansas City, Missouri. This year, VADM D.L. Custis (MC), the Navy Surgeon General, addressed the assembled company and guests, defining the problems besetting military medicine and describing programs for renewal.

"Not since World War II has the reserve strength of the Armed Forces been so vital to the integrity of the active duty element, and hence so critical to the security of our country," VADM Custis said. "Today's planning scenarios, for possible coming conflicts, headline Reserve utilization as integral to on-line total force structure."

The medical program has been reorganized into units, along mission lines, which act in close liaison with active-

duty counterparts. "Medical Reserve units, when performing drill duty, are to conduct mission readiness training at like activities to be supported upon mobilization," the Surgeon General explained. "They will provide a source of medical expertise to Naval Reserve center personnel during practical war gaming on ships, shores and stations, and conduct evaluations of exercises which deal with such matters."

The goal is to have a quick reacting contingency response force that reflects real medical support needs, the Surgeon General said.

The George Washington's Birthday Military Party is held annually to present to the Middle West leading naval personalities in the field of medicine, and to promote interest in the U.S. Navy. Presiding officer at this year's festivities was CDR Phillip E. King, MC, USNR, commanding officer of USNR Medical Company 9-4.



ADMIRALS ALL—Gathered for the 1975 George Washington Birthday Military Party in Kansas City are: (left to right) RADM Robert Switzer (MC), VADM Donald L. Custis (MC), RADM Richard H. Kiene (MC, USNR, Ret.), and RADM Earl Forhy, Jr.

EXECUTIVE POSITIONS FOR NAVY NURSES

Sometime in July, two Navy nurses will write another "first" in the history of the Navy Medical Department: CAPT Bernadette A. McKay will become director of administrative services at Naval Submarine Medical Center, New London, Connecticut; and CDR Harriet A. Simmons will become officer-in-charge of the Naval Station dispensary at Mayport, Florida. They will be the first women as well as the first Nurse Corps officers to assume these high-level executive positions.

CAPT McKay is currently assistant for nursing to the Medical Inspector General, Bureau of Medicine and Surgery. She received her basic nursing education at St. Vincent's Hospital School of Nursing, New York City. Appointed an ensign in the Nurse Corps of the U.S. Naval Reserve in March 1952, she subsequently was a member of the operating room nursing staff at Naval



CAPT Bernadette A. McKay: first nurse to serve as director of administrative services of a naval medical facility.

Hospitals Portsmouth, Virginia; Oakland, California; St. Albans, New York; and at the Navy Medical Unit, Tripler Army Hospital, Oahu, Hawaii. She also served as officer in charge of the Operating Room Technicians School at Naval Hospital Oakland.

In November 1964, CAPT McKay joined a Navy surgical team assigned to a provincial hospital at Rach Gia, South Vietnam, where she served as a nurse advisor on detached duty to the Agency for International Development, Department of State. Following her return from Vietnam, she served as operating room supervisor and assistant chief of the nursing service at Naval Hospital Philadelphia; as senior Nurse Corps officer at U.S. Naval Station, Kodiak, Alaska; and as chief of the nursing service at Naval Hospital, Lemoore, California.

CAPT McKay, who transferred to the Regular Navy in 1957, graduated with distinction from the University of Minnesota in 1962, with a bachelor's degree in nursing service administration; she received her master's degree in this field from Catholic University of America, Washington, D.C., in 1968. She holds the Navy Commendation Medal; Combat Action Ribbon; Armed Forces Honor Medal, first class; Vietnamese Service Medal; Vietnamese Campaign Medal; Civil Actions Medal, first class; Meritorious Unit Commendation Ribbon; and National Defense Service Medal with bronze star.

CDR Harriet Simmons, who will advance to the rank of captain about the same time she joins the staff of the Mayport dispensary, is special assistant for Nurse Corps programs at the Officer Indoctrination School, Newport, Rhode Island. A native of Worcester, Massachusetts, she served two tours of active duty in the Army Nurse Corps (1944-1946; 1950-1952), and was appointed a lieutenant in the Nurse Corps of the U.S. Naval Reserve in March 1956. She has been on continuous active duty in the Navy since 1959, serving as charge nurse of intensive care units at Naval Hospitals St. Albans, New York, Charleston, South Carolina, and Oakland, California; as senior nurse afloat for Military Sea Transport Service, Atlantic; as senior nurse at Naval Dispensary, Keflavik, Iceland; and as chief of the nursing service at Naval Hospital, Quonset Point, Rhode Island.

CDR Simmons graduated from the Hartford Hospital School of Nursing, Hartford, Connecticut, in 1943, returning in 1946 for training in anesthesia. She received her bachelor of science degree in nursing from Teachers' College of Columbia University in 1964, and her master of science degree in naval management from the Naval Postgraduate School, Monterey, California, in 1966.

She holds the European and American Campaign Medals, World War II Victory Medal, National Defense Service Medal, and Meritorious Unit Commendation Ribbon.



CDR Harriet A. Simmons: first nurse to serve as officer in charge of naval dispensary.

FEDERAL NURSING SERVICE AWARD

All nurses in the Federal nursing services are eligible to compete for the Federal Nursing Service Award by submitting an essay on a beneficial study of, or contribution to, professional nursing in any area of practice. The essay may describe the result of a study, an actual experience, or a combination of both. It must not have been previously published.

An honorarium of \$500 and a scroll will be presented to the winner during the Annual Meeting of the Association of Military Surgeons of the United States (AMSUS), 10-15 December 1975. This award was initiated by Roche Laboratories Division, Hoffman-LaRoche, Inc., and is given by the Association of Military Surgeons.

The following rules must be observed:

Essays must be 3,000 to 10,000 words, double-spaced, and typed on paper approximately 8½ x 11 inches.

Seven copies must be submitted to the AMSUS executive director, postmarked no later than 30 June 1975.

The true name of the author must not appear on the manuscript; a nom de plume or symbol must be used. A sealed envelope bearing the nom de plume or symbol on the outside and containing the true name and address of the author must accompany the essay.

Essays submitted become the property of AMSUS, and cannot be returned except on special request.

Winners will be notified by mail early in August.

In addition, nominations for 1975 AMSUS awards are currently being considered by commanders and directors of Federal medical facilities. Nominations must be received by the Awards Committee, at the following address, postmarked not later than 30 June 1975: AWARDS, Association of Military Surgeons of the United States, 8502 Connecticut Ave., Chevy Chase, Maryland 20015.—BUMED Code 32. 🍀

TRAINING AVAILABLE FOR HOSPITAL CORPSMEN

Hospital Corps training requirements have been determined for Fiscal Year 1976. Since these requirements change almost weekly, corpsmen are encouraged to apply for two different courses, and to consider the following information before requesting training at a "C" School:

No training is available in specialties leading to the following Navy Enlisted Classifications:

- 8453 (Electrocardiography technician)
- 8472 (Medical photography technician)

Quotas for the following specialties are extremely limited, and will probably be filled by 1 July 1975:

- 8409 (Aerospace physiology technician)
- 8433 (Transplantation technician)

Applicants for training in the following specialties are urgently needed at all times:

- 8402 (Nuclear submarine medicine technician)
- 8407 (Nuclear medicine technician)
- 8482 (Pharmacy technician)
- 8492 (Special operations technician)
- 8493 (Medical deep sea diving technician)

Quotas for the remaining specialties are generally available, with the following specialties reflecting the greatest need:

- 8406 (Aerospace medicine technician)
- 8424 (Medical services technician)
- 8444 (Ocular technician)
- 8452 (X-ray technician)
- 8483 (Operating room technician)
- 8485 (Neuropsychiatry technician)

Training in the specialties of 8478 (Biomedical equipment technician, X-ray) and 8479 (Biomedical equipment technician, electronic) will be offered for the first time in Fiscal Year 1976. The prerequisite for such training is the specialty 8477 (Biomedical equipment technician, basic). Personnel possessing this Navy Enlisted Classification are encouraged to apply.—BUMED Code 34. 🍀

DEADLINE EXTENDED FOR NAVY ENVIRONMENTAL PROTECTION AWARDS

The deadline for submission of applications for this year's Secretary of the Navy Environmental Protection Awards competition has been changed from 15 March to 15 October 1975. The change puts the Navy's award program in phase with the Department of Defense award program, conducted each spring.

In addition, the number of categories for competition has been expanded. Participants may now compete

in the following areas: large and small ships, large and small shore installations, industrial facilities, medical facilities, research and development activities, and large and small Marine Corps activities.

The extensive check-off list used in previous competitions is no longer required. However, local commands may continue to use the list as a tool for self-evaluation.

The annual awards were established to increase environmental awareness throughout the Navy and Marine Corps, and to recognize activities that have strong environmental protection programs. All commands and activities are urged to participate in this program.

Applications for the program should be submitted to the Chief of Naval Operations via the normal change of command. OPNAV Instruction 6240.3D will soon be issued, announcing the changes in the program.—BUMED Code 5. 🍀

INDUSTRIAL ENVIRONMENTAL HEALTH BULLETINS

The Occupational Environmental Health Division (BUMED Code 56) has issued a series of bulletins, prepared by the Navy Environmental Health Center, to help Medical Department personnel recognize and evaluate new industrial chemicals or processes that are hazardous to health. A concise, factual statement about potential problems associated with scientific and technologic advances is given, along with guidance on how to avoid personal injuries, or care for such injuries as may arise. Included also is a "Hazard Notice" to post for review by all personnel who may be exposed to hazardous agents.—BUMED Code 56. 🍀

ERRATUM

OCCUPATIONAL HEALTH PLANNING AND PROGRAM EVALUATION COMMITTEE

One of the telephone numbers listed last month (*U.S. Navy Medicine* 65[4]:23) for the newly formed Occupational Health Planning and Program Evaluation Committee in BUMED Code 56 was incorrect. The correct telephone numbers are:

Commercial: (Area code 202) 254-4620

Autovon: 294-4620 or 227-3639

Field activities are encouraged to offer constructive criticism of and recommend improvements in regional occupational health programs.—BUMED Code 56. 🍀

DENTAL FACILITIES ON THE MOVE

Mobile dental facilities are used to bring dental care to Navy personnel who do not have access to stationary dental clinics.

At Naval Ordnance Station, Indian Head, Maryland, a prototype dental mobile maintenance facility (MMF) is temporarily replacing the dental clinic destroyed by fire on 8 March 1975. Developed by the Naval Dental Research Institute, Great Lakes, Illinois, for field use with the U.S. Marine Corps, Seabee, and fleet units, the 8' x 8' x 20' MMF van was undergoing field trials at Marine Corps Air Station, Cherry Point, North Carolina, when the call came for it to be packed and transported to Indian Head for its first use in an actual emergency situation.

The MMF (dental) van holds a two-chair clinic, with self-contained water, heating, cooling, air compression, X-ray, and suction capabilities. The van arrived at Indian Head on 22 March 1975, for an anticipated stay of 60 to 90 days.

At Norfolk, Virginia, a mobile dental unit from the Naval Regional Dental Center was hoisted aboard the USS *San Diego* last October, while the ship was in a civilian shipyard. Later the mobile dental department supported the *San Diego* crew at sea during post-yard trials. In February 1975, when the *San Diego* departed for Mediterranean deployment, the mobile unit was again placed ashore.

This concept of bringing dentistry to the fleet permits a ship's company to obtain needed dental care without having to commute long distances for treatment. During the four months the mobile unit was aboard the *San Diego*, 2,327 dental procedures were accomplished, including 1,230 permanent restorations.—BUMED Code 6; PAO, NAVREGDENCEN Norfolk, Va.



This mobile maintenance facility (dental) is designed for field use with Marine Corps, Seabee, and fleet units.



The mobile maintenance facility holds a two-chair clinic, and makes dental care accessible to personnel who are far from stationary dental clinics.



A mobile dental unit is hoisted aboard the USS San Diego in a civilian shipyard at Norfolk.

CHAMPUS CHANGES

The Assistant Secretary of Defense (Health and Environment) recently issued a number of changes to or reiterations of benefits available from civilian sources under the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS). These changes are in keeping with action initiated in 1973 to restore CHAMPUS to the type of medical program it was originally intended to be, and to remain within budgetary limits established by Congress.

The following changes apply to all services and supplies obtained on and after 28 February 1975.

Changes in the Basic Program

Limit coverage of operant psychological conditioning devices for enuresis to a supply purchase of \$50 or less;

restrict to attending physicians payment for professional guidance on use of such devices. Purchase of such devices shall be covered by CHAMPUS only when the attending physician certifies that organic causes of enuresis have been excluded by examination.

Delete coverage of devices which convert ordinary shoes to orthopedic shoes (e.g., arch supports).

Delete coverage of megavitamin and orthomolecular therapy in psychiatry.

Delete services of pastoral counselors, family and child counselors, and marital counselors.

Do not provide coverage of programs designed to help patients stop smoking, or professional services for the same purpose.

Require inpatient cost-sharing on each inpatient care admission, except for pregnancy and complications of pregnancy which will be covered later under a separate rule.

Delete coverage of all services and supplies determined to be not medically necessary for the diagnosis or treatment of an illness, injury, or bodily malfunction. Exceptions will be made for family planning and for Christian Science benefits.

Delete all coverage for which the patient, his estate, or responsible family member has no legal obligation to pay, or for which no charge would be made if the patient were not eligible for CHAMPUS.

Delete coverage of all services and supplies for treatment of obesity when obesity is the sole or major condition being treated.

Delete all reconstructive surgical procedures which are justified solely on a psychiatric need.

Changes in the Program for the Handicapped

Delete enuresis as a qualifying diagnosis for coverage.

Changes Affecting Both Programs

Delete coverage of all alterations to living spaces and permanent fixtures attached thereto.

The following changes apply to CHAMPUS coverage for supplies and services obtained on and after 9 March 1975:

Changes in the Basic Program

Restrict adjunctive dental care to those instances in which clinical evidence establishes that an oral disease or infection is significantly complicating a medical or surgical condition other than one involving the teeth and their supporting structures. Dental services shall

be limited to those necessary to eliminate the oral disease or infection. This does not include dental care necessitated by trauma which does not meet the above standard.

Cost-share all dental care adjunctive to pregnancy when provided on an outpatient basis under outpatient cost-sharing rules.

Require a nonavailability statement whenever adjunctive dental services are provided by a civilian source to a dependent who is receiving care for pregnancy in a military medical facility. Dependents of active-duty members not residing with the member are exempted.

Require that all nonemergency dental care be approved in advance.

Limit inpatient cost-sharing of complications of pregnancy to diseases, medical conditions, or surgical conditions directly influenced by or directly influencing the condition of pregnancy.

Require that a therapist's services be supported by a physician's certification: (1) that the patient requires the services for a stated diagnosis; (2) that a plan for furnishing such services has been established and will be reviewed by the physician no less than once every 30 days; and (3) that the services are to be furnished only while the patient is under the care of the physician.

Require that the services of all therapists be recertified at least once every 30 days by the attending physician. Recertification must state that there is a continuing need for such services, and must include an estimate of how long such services will be required.

Limit payment of psychologists' services billed on a fee-for-service basis to those psychologists who are licensed or certified; or who have a doctoral degree in clinical psychology and a minimum of two years of supervised experience in clinical psychology in a licensed hospital, mental health center, or other appropriate clinical setting as determined by the Director, OCHAMPUS.

Delete coverage of perceptual and visual training.

In determining deductions and coinsurance, limit credits to authorized services and supplies, and CHAMPUS-determined reasonable charges.

Cost-share all surgery in ambulatory surgical centers under outpatient cost-sharing rules.

Delete coverage of air ambulance service unless a physician certifies that such service was necessary to preserve life or limb.

With respect to beneficiaries covered for physical disability or kidney failure under the Social Security Amendments of 1972, limit coverage to those services and supplies not available under Medicare.


For all long-term care under the Basic Program, require a public official's statement that appropriate care is not available from public institutions.

Changes Affecting Both Programs

Delete coverage for service-connected conditions for which the Veterans Administration will provide necessary care.

Disapprove claims for all services and supplies that require prior approval but were not approved in advance.

It can be expected that several more changes will be issued by the ASD(H&E). BUMED Code 73 will disseminate such changes to Health Benefits Counselors.


Beneficiaries with questions about CHAMPUS coverage should be advised to contact the nearest Navy Health Benefits Counselor (or CHAMPUS advisor at Army and Air Force installations), or to direct their inquiries to BUMED Code 73. 

HM2 TURPIN COMMENDED FOR LIFE-SAVING EFFORT

While off duty near his home in Milton, Florida, HM2 Roy Turpin rushed to the aid of a five-year-old Navy dependent who had been struck by lightning and showed no signs of life. A student in the physician's assistant training program at the Naval Aerospace and Regional Medical Center, Pensacola, HM2 Turpin administered immediate emergency first aid, continuing this care as the child was transported by ambulance to a nearby hospital.

For his prompt, decisive, and professional action in this critical situation, Petty Officer Turpin was recently awarded the Navy Commendation Medal.—PAO, NARMC, Pensacola, Fla.



LIFE-SAVER—HM2 Roy Turpin receives congratulation from RADM R.D. Nauman (MC) upon earning the Navy Commendation Medal for meritorious action in saving a child's life. 

FUTURE TAKES SHAPE AT NNMC

The future is shaping up at the National Naval Medical Center, Bethesda, Maryland, where construction will begin sometime this spring on both a new medical complex and on the long-awaited Uniformed Services University of the Health Sciences.

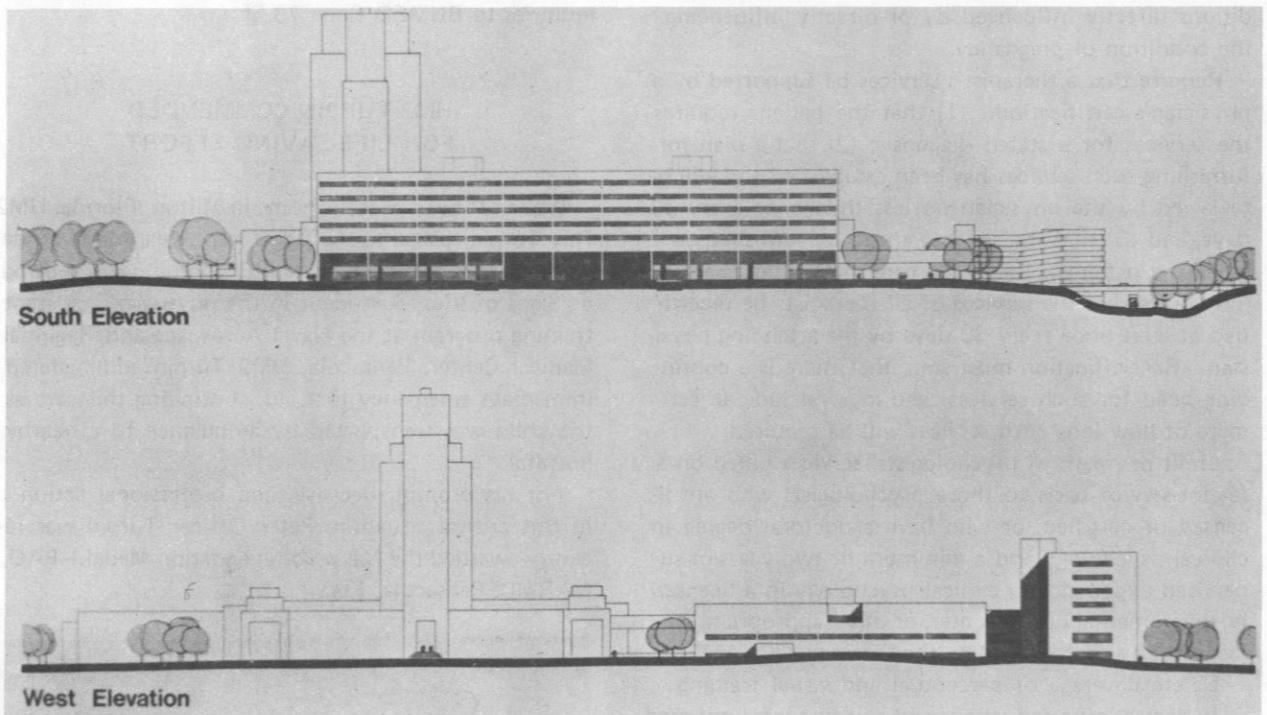
The first phase of activity will include construction of a facility to house a 780-car garage, as well as spaces for comptroller and supply services. The garage will handle outpatient parking after construction begins on the new hospital, probably early next year.

The new hospital will house 500 acute care and 100 light care beds, with the total number of beds at NNMC remaining constant at 750. There will be no open

wards. Instead, wards will be made up of rooms designed to hold one, two, or four patients.

The hospital will also include a seven-story nursing building, and a three-story ancillary building for such activities as outpatient clinics, operating rooms, and food services. When the new facility is completed, probably in 1980, the NNMC tower will be turned over to administration and educational services.

Meanwhile, construction of the first of four main buildings of the USUHS will begin this year on the site of Stone Lake. The building will have underground parking. A new entrance onto the base is also planned to give easy access to the school.—PAO, NNMC.



NEW HORIZONS—The familiar National Naval Medical Center tower will stay, but the view will be radically changed when construction is completed on the new hospital. The NNMC medical complex should look something like this, sometime around 1980.

ASSOCIATION OF OPERATING ROOM TECHNICIANS

The Association of Operating Room Technicians (AORT) offers a national certifying examination, now required for employment as an operating room technician at some civilian hospitals. The Association's continuing education program is also gaining national recognition.

There are 217 local AORT chapters within the United States. Both national and chapter membership bring educational and professional benefits. For further information, contact: Association of Operating Room Technicians, Inc., 1100 W. Littleton Blvd., Suite 201, Littleton, Colorado 80120.

UNITED STATES NAVY MEDICINE

CORRESPONDENCE AND CONTRIBUTIONS from the field are welcomed and will be published as space permits, subject to editing and possible abridgment. All material should be submitted to the Editor, *U.S. NAVY MEDICINE*, Code 0010, Bureau of Medicine and Surgery, Washington, D.C. 20372.

NOTICES should be received not later than the third day of the month preceding the desired month of publication.

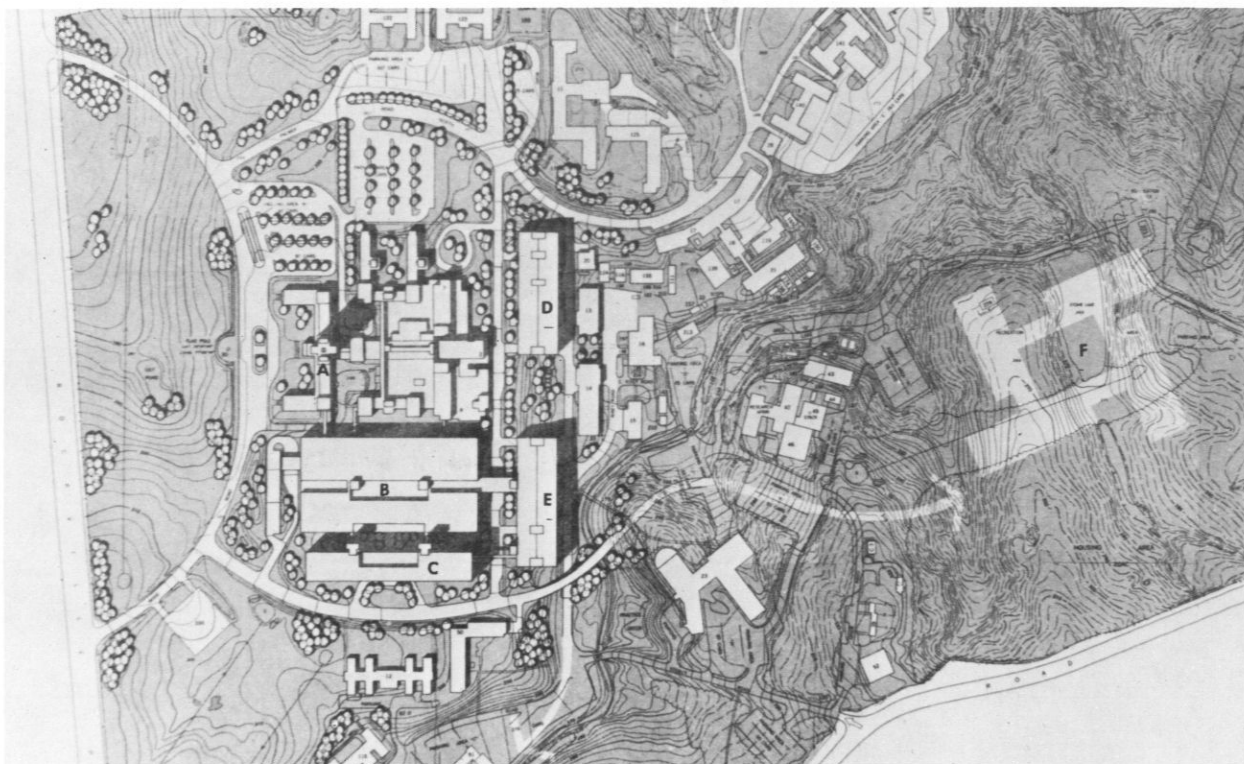
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NEW AT NNMCC—Come 1980, the National Naval Medical Center at Bethesda, Maryland, will have a new look. The landmark of the present facility, the NNMCC tower, is marked by the letter A. Below the tower, toward the bottom of the picture, is the site of the new ancillary services building (B) and the seven-story nursing building (C), which will hold 500 acute care beds. Two new garages are also planned (D and E). The pinwheel of rectangles at the far right (F) marks the site of the Uniformed Services University of the Health Sciences.

U.S. NAVY MEDICINE